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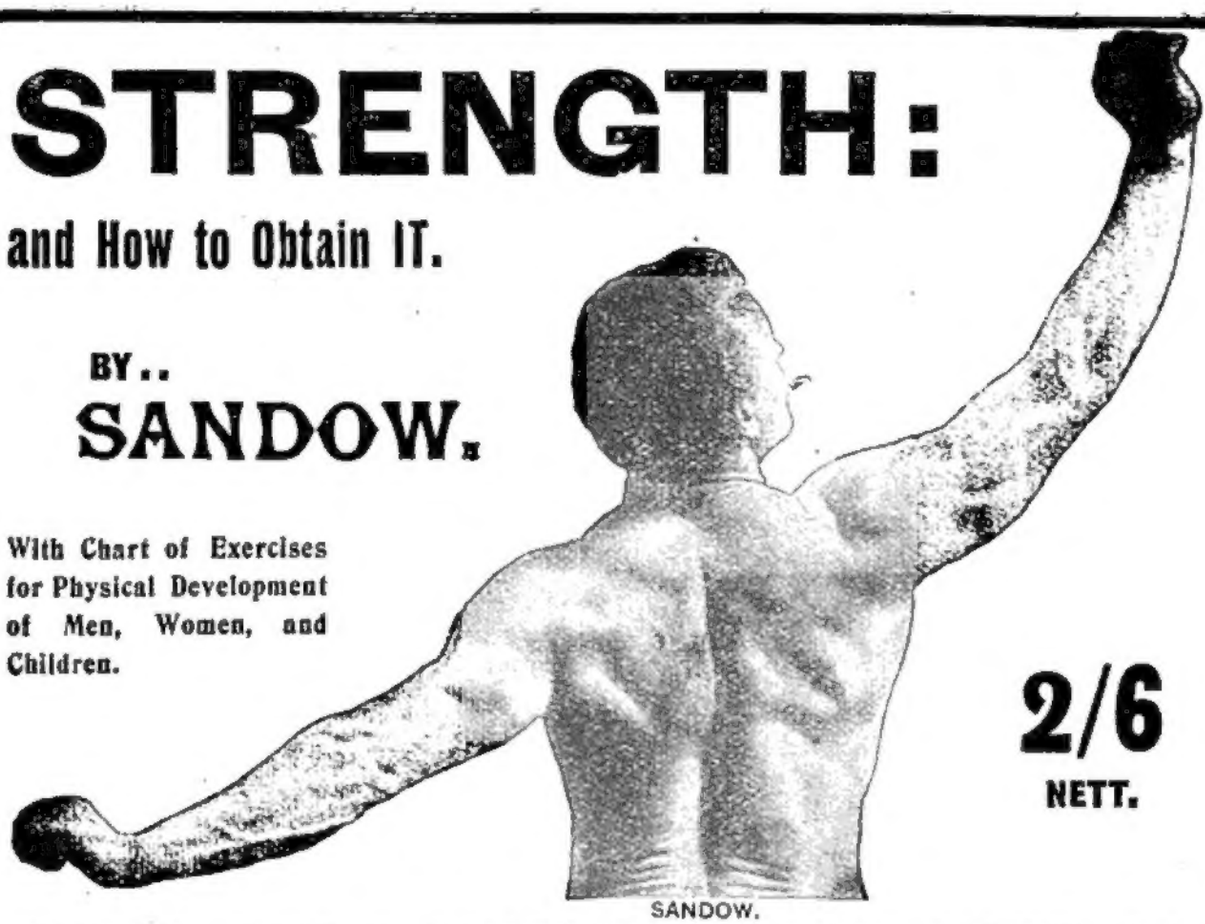

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THE MAN BEAUTIFUL.

BEAUTY has so long been considered an attribute exclusively pertaining to women, that the mere man may ask himself why among us moderns the Greek ideal is not as much in force as regards his own sex as it is with regard to the so-called fair sex. It has been argued, and with much show of reason, by philosophers, that man is inherently as beautiful as woman, both in form and face, the difference being one of kind, not degree. Owing to the stress of modern life, however, men have come to neglect their personal appearance, but this is a great mistake, not only from a social, but also from a business point of view, for first impressions are often the most important, and it is just as necessary for a man to give the best possible first impression by his personal appearance as it is for him to be neatly and fashionably dressed. These remarks apply more especially to defects of the face, which may either be absolutely repulsive, or at any rate give an unfavourable first impression. For example, redness of the nose, which may arise from quite a variety of causes having to do with the general health, is always put down by the unkind as an attribute of the tippler. Eyebrows which meet across the forehead give an exceedingly disagreeable impression, and are thought to be a sign of ill-temper. An ugly mole may mar even the most handsome face, and a birthmark is a hindrance to a man as well as a woman in the matrimonial market as well as socially, for people do not like to receive among their guests anyone who is repulsively disfigured, and I know of at least one man who shot himself because he could not bear to go about with a face one side of which was almost covered by a large port-wine stain.

Medical men are apt not to pay sufficient attention to mere matters of the personal appearance, which do not affect the health of the individual, and it has been left for a lady to take up a branch of science which has too long been neglected. This lady is extremely well known to the reading public as a high authority on health and beauty, and the clever editress of two very popular magazines, *Womanhood:* the magazine of woman's progress and interests, and *Baby: The Mother's Magazine*, a guide to the health and education of children. Mrs. Ballin has been in practice for upwards of twelve years, during which time she has cured over ten thousand cases of superfluous hair, redness of the nose, vein marks, moles, birthmarks, and other disfigurements in both sexes, and it is now becoming known that she devotes special care to gentlemen patients, so many of her lady patients having asked her to treat their husbands or sons. She treats men only for defects of the hair, face, and hands, such for example, as baldness, greyness, ill-shaped eyebrows, hair growing too high on the cheeks, acne, redness of the nose, moles, warts, and birthmarks.

Mrs. Ballin is particularly successful in severe cases of that birthmark known as port-wine stain, and in a recent interview she mentioned the case of an M.D. of the London University who, owing to a terrible disfigurement of this kind, was unable to get any but a poor practice in a poor neighbourhood. Mrs. Ballin entirely removed the mark, and he has now bought a West End practice in London and is doing remarkably well. In another case, a schoolmaster was nearly driven mad by the fact that he had a large mole on the tip of his nose, which afforded considerable amusement to his boys. After the mole was removed by this lady he became a happier man and able to obtain a better position. An amusing case treated by Mrs. Ballin was that of a gentleman who had very thick bushy eyebrows, and was extremely sensitive about them. Before proposing to the lady of his heart, he confided his trouble to Mrs. Ballin's sympathetic ears, and got his eyebrows re-modelled on a more approved plan. In another case a gentleman had a very ugly moustache, but having suicidal tendencies, was not permitted to use a razor. He was brought to Mrs. Ballin by his attendant, and the moustache removed by electrolysis, very much to the unfortunate man's satisfaction.

The majority of Mrs. Ballin's gentlemen patients, however, come to her for redness of the nose, and this she is able to treat most satisfactorily, partly by electrolysis, partly by dieting and by suitable local applications. An interesting case was that of a temperance lecturer, much hampered in his work by the knowledge that the persons he was addressing probably thought him a secret tippler; while another successful case was that of quite a young man who had been suffering from red nose, originally arising after an attack of scarlet fever. Being wealthy he had consulted almost every well known skin doctor in Paris and London, but was eventually cured by Mrs. Ballin after only twelve sittings.

As men are naturally shy about being seen when going for beauty treatment, every precaution is taken that friends shall not meet, or gentlemen patients encounter any of the lady visitors, a separate waiting-room being kept for gentlemen on the ground floor of Mrs. Ballin's handsome residence at 18, Somerset Street, Portman Square, W., while that for ladies is on the first floor. Her advice is sought on many subjects, and is always of practical service.

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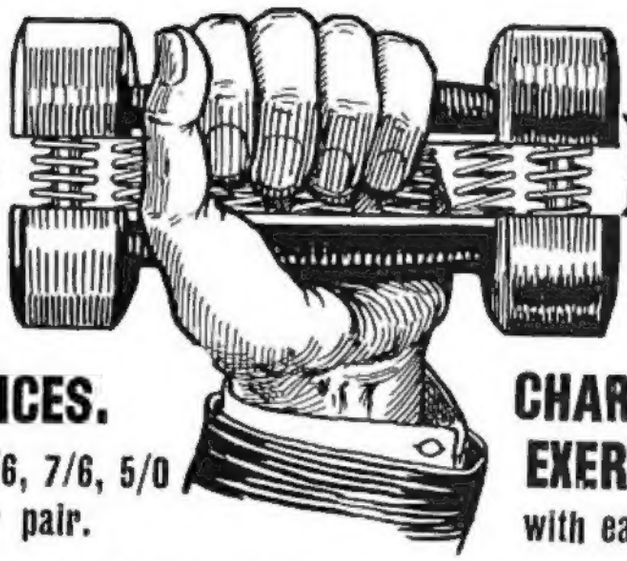

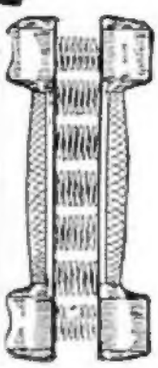

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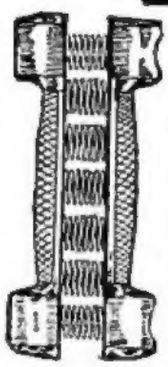

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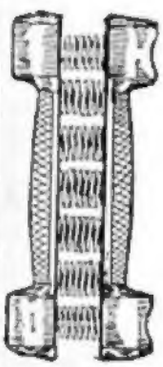

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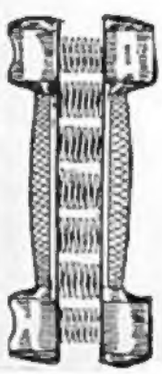

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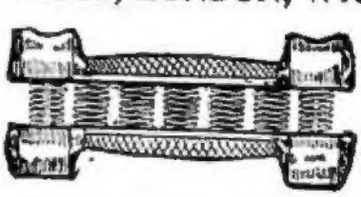

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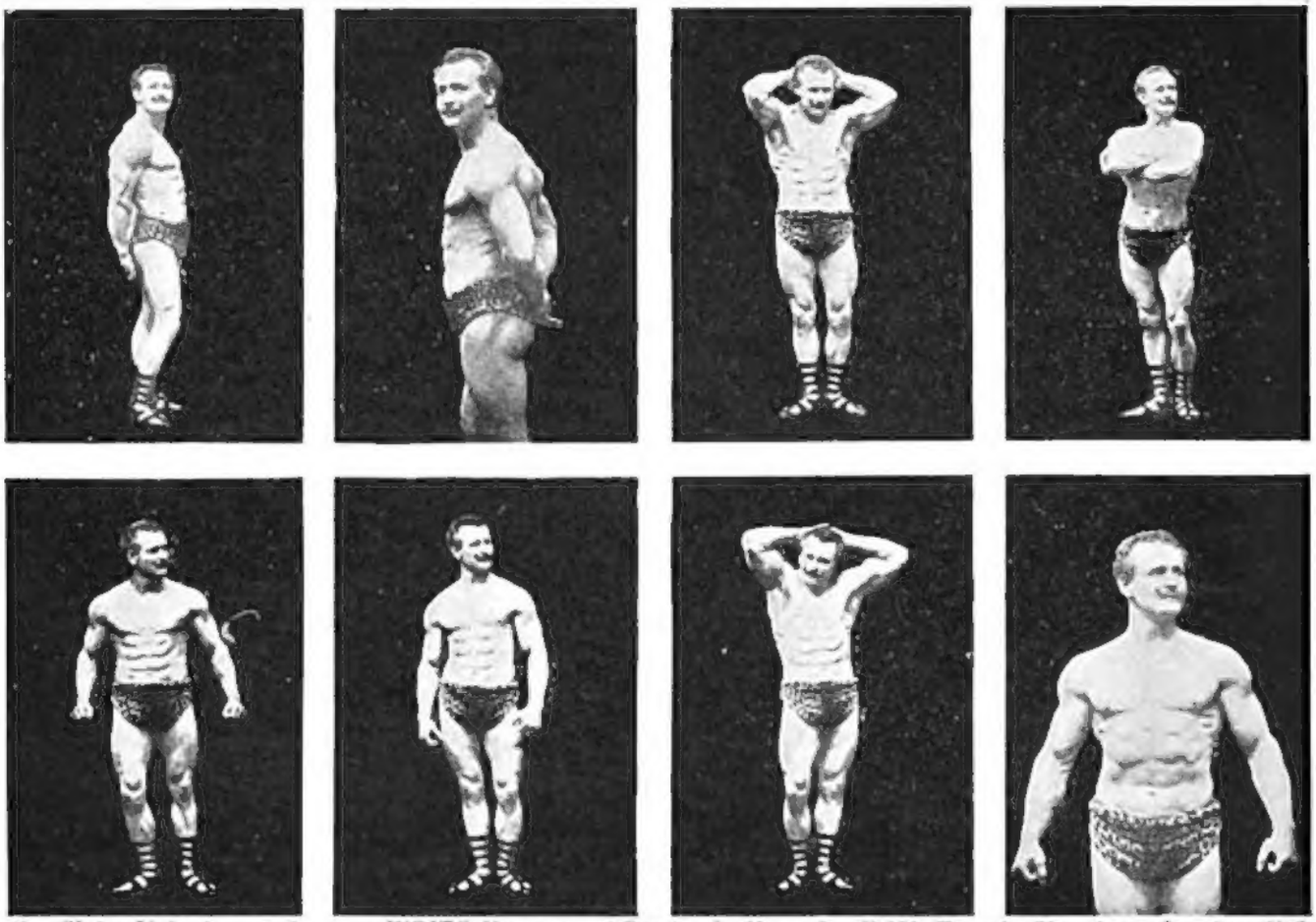

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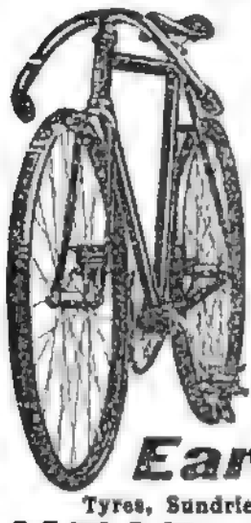

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No. 74. Volume XIII.

MONTHLY 6d. SANDOW'S MAGAZINE. MONTHLY 6d.

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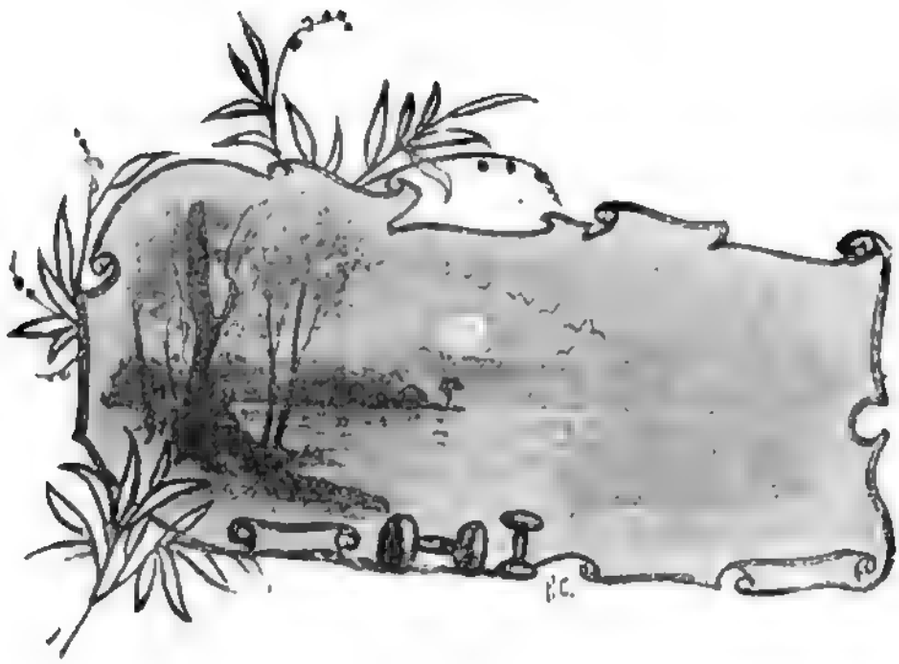
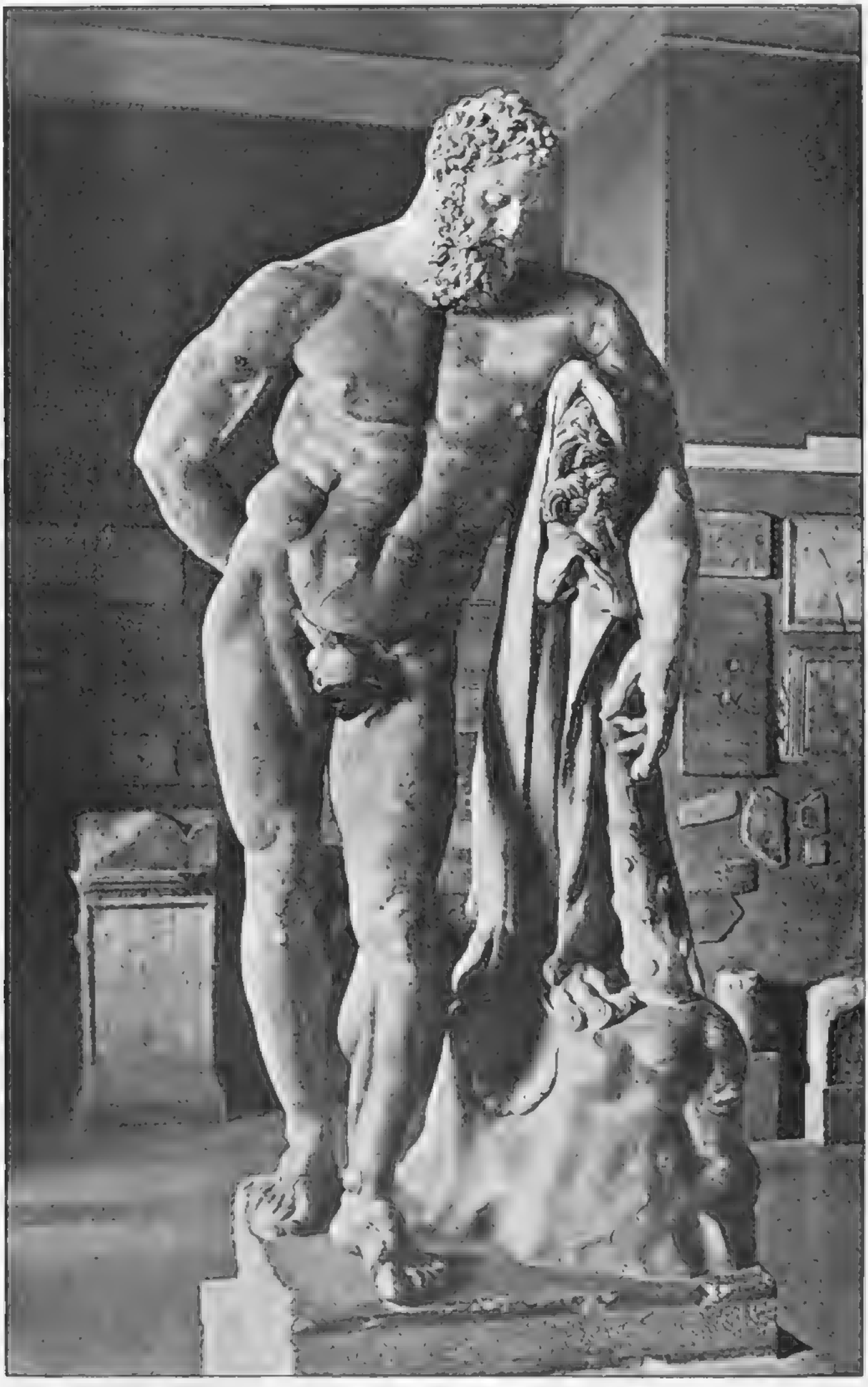
HOW TO COMPETE.

Each attempt should be written out on a sheet of foolscap paper, and, if possible, rough diagrams made. Pasted on every attempt must be the coupon in this week's "Pearson's Weekly," giving the contributor's name and address.

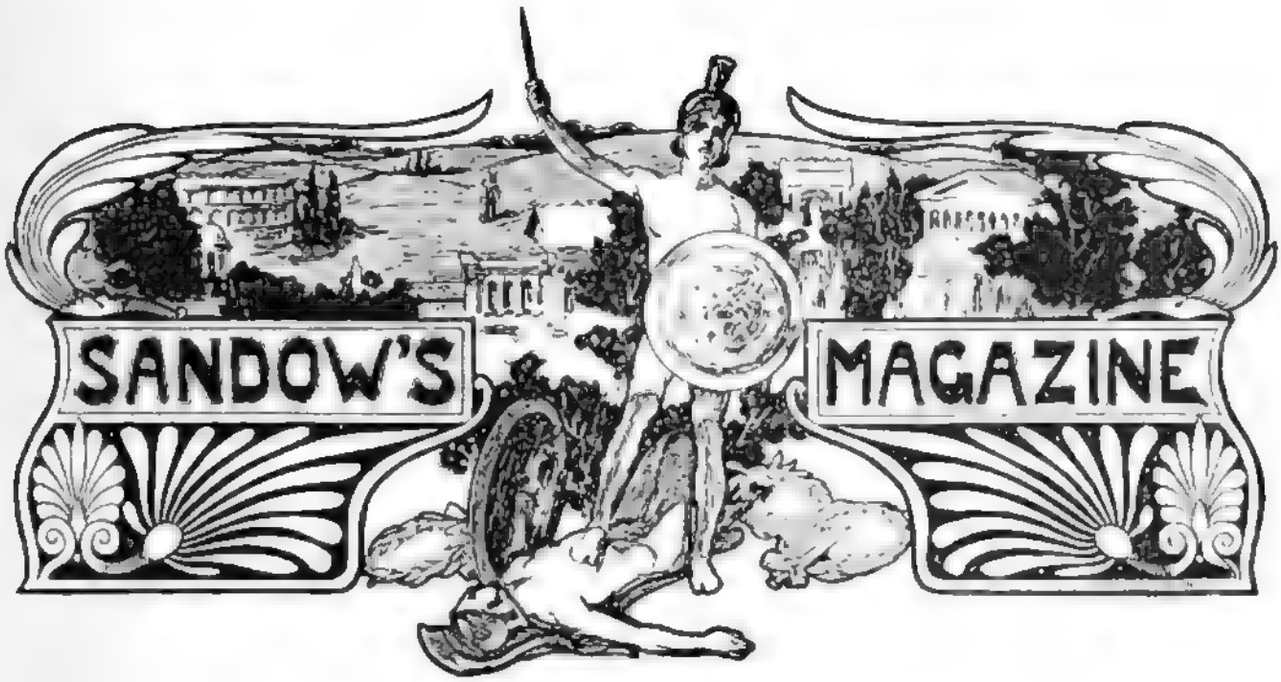
The decision will be made by a COMMITTEE of EXPERTS, representing (*a*) the medical profession, (*b*) expert teachers and exponents (both ladies and gentlemen) of the best of the present systems, (*c*) experts of games and athletics themselves.

The contest is now open, and full particulars will be found in the current number of "Pearson's Weekly."





HERCULES (*British Museum*).



OF

PHYSICAL CULTURE, SPORT, AND FICTION.

VOL. XIII. *AUGUST*, 1904. No. 74.

The "Answers" Competition.

LITTLE did I think when approached by Messrs. Harmsworth to give to readers of *Answers* the benefit of my experience in the building up of the body, that such wide-spread interest would be created, but the shoals of letters I have received from all parts of the globe went a long way towards proving two things: Firstly, that the orange-coloured organ finds its way into the remotest parts of the world; and secondly, that there are a great many people, even in those remote parts, who are anxious to bring about an improvement in their health and physique by means of systematic exercise.

So satisfied were Messrs. Harmsworth that such is the case, they have launched a project which I can only characterise as novel and enormous, and one which should be the means of creating even more interest than ever in the great question of the nation's physique, a question which is becoming more and more important every day. I refer to the *Answers* Physical Culture Contest, particulars of which first appeared in the issue of July 2nd. It is fitting that a paper with such an enormously wide circulation should promote such a competition, for almost everyone buys his *Answers*, and if he or she takes the slightest interest in their bodily

welfare, surely the great incentive offered should be sufficient to spur them on.

In their munificence, Messrs. Harmsworth have decided to give a shield to the value of £100, or hard cash if so desired, to the one, be he old or young, who, during the sixteen weeks dating from the first of this month, is able to show the most improvement physically. This shield will be a massive piece of work, of which the winner will, without doubt, be justly proud, for it is to be executed from the design of one of our leading artists. To the next five in order solid gold medals will be awarded; the following twenty will receive silver medals, whilst in addition there will be one hundred consolation bronze medals, all struck from dies of a special design.

As in these columns I am writing to those who, I take it, have already taken an interest in their physical welfare, it is almost superfluous to urge them to the endeavour of securing one of these handsome mementos of what, as I have so often said, is really a reward in itself, viz., the attainment of health and strength. But there are laggards, I know, who require some incentive to do their best—I have met plenty of them. Many are the letters I receive asking me to present a medal to the writer for having brought himself to what in his opinion is the pitch of physical perfection. As a rule it is far from it, but even if his attention to my system has brought about such satisfactory results surely he has gained his reward.

The competition which has been arranged by *Answers*, however, has been organised with another object, and that is to endeavour to get people who have never tried, to understand what benefits are to be derived from indulging in systematic exercise. The great feature of the competition is that it is not the most perfect physique which will win the prizes, but those who by conscientious work during the period from August 1st, have brought about the most physical improvement. Thus, you see, those who have already obtained a good muscular development will stand no better chance than those who have little or even none. Indeed, the well-developed person is, to an extent, handicapped, for, as everyone knows, after one has arrived at a certain pitch it is difficult to show any appreciable advance. So you see, those of you of poor physique, your opportunity has come, and you are able to compete for these handsome prizes, with, if anything, a little in your favour to start with. And to those of you who make up your minds to work conscientiously during the sixteen weeks, I say, if at the end of that time you do not bless the *Answers'* competition and systematic exercise, then in the words of the immortal bard, "Write me down an ass." I have mentioned above that there are to be a hundred consolation medals awarded. I would like to add that there is even a greater consolation award than that in the shape of good health and strength, which will be acquired by all competitors who make a conscientious effort to secure a prize.

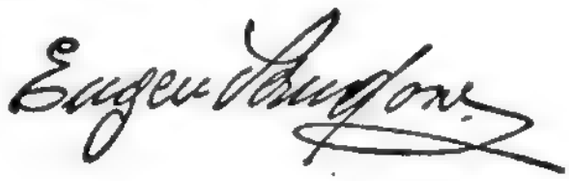
As the space at the disposal of my contemporary is limited, and would-be competitors will no doubt be anxious to gain some information other than is contained in the particulars of the competition as set out, I have arranged with the proprietors of *Answers* that any questions will be replied to through the "Hints" column of the magazine, where I shall be pleased to give my advice or suggestions to all and sundry. I also propose to give in the magazine each month, whilst the competition lasts, a few little pieces of advice to those who are working from the exercises which I have arranged to supply *Answers* with for the guidance of competitors, and which will appear each week.

I have been requested by Messrs. Harmsworth to co-operate with the Health Editor in adjudicating the prizes, and although the task is sure to be an enormous one, I shall look upon it as a labour of love, for it will, without doubt, be one of the most unique physical censuses ever compiled, and should prove of immense value on the question of deterioration.

The rules governing the competition are

exceedingly simple, but it may be as well to give the gist of them here. A measurement form, similar to that which appears on my Anthropometrical Chart, will be published from time to time in *Answers*, and upon this the candidate has to enter the required particulars as to height, age, and the measurements of the neck, chest (normal and expanded), upper arms, fore arms, waist, hips, thighs and calves. These measurements have to be certified as correct by a doctor, or a clergyman, or a solicitor, or a commissioned officer in either Army or Navy, or a householder. Having filled up the form, it should be forwarded, on or before July 30th, to the "Health Editor," *Answers*, Carmelite Street, E.C. You must understand that entries may be made at any time the competition is in progress, but the fact must not be lost sight of that those who enter in time to obtain the benefit of the full sixteen weeks' exercise will have the better chance of improvement. On each of the sixteen weeks from August 1st, a number of exercises carefully prepared by me will be inserted in *Answers* for the benefit of competitors, and at the expiration of the time stated another form will be published. This has to be filled in and vouched for in precisely the same way as the preceding return. The forms will then be gone through carefully by the Editor of *Answers* and myself, and in comparing the forms, the question of age, state of health, and development at the commencement will be carefully considered when comparing entry forms with the final forms. Thus, for instance, as every male reader between the ages of sixteen and sixty is eligible to compete, it stands to reason that a man of sixty will not produce such a marked increase after three months' exercise as a youth of sixteen. But this will all be taken into consideration in our adjudications, and thus every entrant will be placed upon a thorough equality.

In conclusion, I should like to remind my readers that they need have no compunction in asking questions with regard to the competition. I shall be only too pleased to give all the assistance in my power, and I trust that readers of both *Answers* and SANDOW'S MAGAZINE will do all in their power to assist the proprietors of the former in their grand efforts to assist us in the object which we have so much at heart—the raising of the physical standard of the nation as a whole. It is to be sincerely hoped that ere long others may follow in the footsteps of Messrs. Harmsworth, and lend their aid in bringing home to the nation the great need for systematic exercise in order to maintain the high prestige which the British race has gained.



Physical Culture.

A Lecture by Dr. H. G. DEANS.

THE following interesting lecture on "Physical Culture" was recently delivered by Dr. H. G. Deans, of Edenfield, Lancs. :—

"The Greeks, celebrated so deservedly for the stage of advancement to which they raised physical culture, laid down two axioms of their science; first that health, strength and beauty were interrelated, and second, that the 'golden mean' was the true guide to secure that triple end. In using the term health, I may be using a term that may not be understood in the same sense as I myself use it. The late Professor Parkes, in his manual of Hygiene, gives the following definition. It is, he says, the art of preserving health, that is of obtaining the most perfect action of body and mind during as long a period as possible consistent with laws of life. In other words, it aims at rendering growth more perfect, decay less rapid, life more vigorous and death more remote. That is the subject that I wish to direct your attention to to-night, and to ascertain if, and how far, physical exercises affect the various vital functions of our frame, and how far they contribute to render our growth more perfect and our life more vigorous, and, as a part of the same process, our decay less rapid and death more remote. Through the 2,000 years that have elapsed since Greek culture was at its zenith, no other nation has taken up the idea of physical culture, with any degree of thoroughness, till the nineteenth century, and it has been left to a northern European people to do so. Before we begin to consider the subject of physical exercise itself, let us glance at the great principle of law which seems to pervade the whole universe of life, as far as we know it, whether of plants or animals. It is that for the proper maintenance of health there must be a constant alternation of activity and rest, the one following after and preparing for the other. We see it in the seasons, Summer and Winter, in the succession of night and day, light and darkness. A plant that gets its rest in the dark, and that is called into activity by the sunlight, would soon fade if keep constantly in the dark, or would show a sickly overgrowth if it were supplied with artificial light so as to make a never-ending day. You know that plants in hot countries have their period of rest in the dry season. In Egypt, the blue water-lily obtains rest in a curious way. This plant abounds in several of the canals at Alexandria, which at certain seasons become dry, and the beds of these canals, which quickly become burnt as hard as bricks by the heat of the sun, are then used as roads. When the water is again admitted, the plant resumes its growth with renewed vigour. Thus the rest in some climates is given by the scorching heat of summer, in others by the bleak cold of winter. The principle is the same in all, and the rest which the seasons and night and day give us for the world at large are true for all the forms of life within it. It is true for all of us and quite familiar if we only think of it. We know that if we labour all day, sleep will assert itself at night. Not one of us can hold his arm out for ten minutes at a time without tiring of the continuous strain, and we know that if a man is always thinking, his brain will give way and he will turn mad, or if he is

constantly eating, his stomach will suffer and he will have serious indigestion. Let us take this great principle of life with us, that it is as true for our minds and bodies as for the plants, that a regular succession of activity and rest must be provided if we are to lead a healthy life. Physical culture or physical exercise means action, practice or use, and the word gymnastics with present use means systematically arranged exercises or manipulation of parts of the human body as shall secure the retention, preservation and restoration of harmonious healthy functional activity. It is beyond the scope of such a lecture as this to do more than discuss the general principles that underlie the subject of physical culture. All true gymnastics must be devised with strict regard to anatomical and physiological law, and with a knowledge of the effect produced by the movements and manipulations involved. The human organism at all ages, conditions of development, state of health, must be studied scientifically. Movement in the infant is the first sign of life, and the activity shown by young children points to movement being a necessity of existence. Retention of the ideally healthful state usually ascribed to infancy is the first care of gymnastics. Movement is absolutely essential for the preservation of the health of our organs, otherwise they become weakened and atrophied, so that exercise, far from destroying the living organism, is a sure means, not only of retaining health, but of adding to this lack, provided that normal conditions as to food, clothing and ventilation and washing exist. A true gymnastic system, therefore, is one that will follow out the laws of development and the natural tendencies of a healthy life. If one only spends a brief hour in observing the physique of a city crowd, one is soon convinced of the appaling fact that anything approaching a perfectly balanced body in man or woman is as rare as 1 in 100. Flat chests, rounded backs, lateral curvature, weak ankles, and lack of carriage, are all so obvious that the wonder is that any people so rigorous in its demands as to mental culture should be so callous about the defects in physique. I don't think it is too strong to assert that to be physically deformed from carelessness is as great a shame as illiteracy. The people of the British Isles have, on account of this universal love of games and sport, a very high average of physical strength and endurance, especially so in the leisured classes. Even in these, however, we do not have proper harmonious development. What then can we expect of a mechanic stooping over a bench eight hours a day with a tool clenched in his hand, what of the factory operative breathing the dust from the material he uses, what of the miner picking coal while lying on one hip, none of them enjoying a good supply of fresh air and light, and finding relaxation only as onlookers at active games and not as participators. Many muscles by habitual use in daily life acquire an abnormal length either by being too long or too short, and when the average man seeks a position of rest and ease, his attitude is far from graceful, his over-lengthened muscles refuse to contract fully, and his overshortened ones refuse to fully expand again. The bad positions occupied during work have become so ingrown through long continuance, that man regards them as a necessity of his occupation, and any advice as to how to straighten his crooked and stiffened joints he will reject as unpractical. All crooks and unnatural curves have to a great extent their origin in a permanently bad length of muscle, being too long on one side and too short on another. Physical culture essentially means movement, and movement of our body of whatever sort implies contraction of muscles and movement of bones, and in order that you may more clearly understand the subject, let us look at some general points as to the contraction of muscles and their mode of arrangement, and after that we can pass on to the effects of muscular exercise on breathing, on circulation, on the nervous system and the development and vigour of the body generally.

To begin with, we find them to be the agents in our body for movements of all sorts, and they are endowed with the great characteristic of contraction or alteration in shape in a particular way. Example of a common earthworm. If you watch a common earthworm crawling along the ground, you will notice that it lengthens its body out, becoming thinner at the same time, and from having first fastened its tail against the ground, it thus pushes its head forward. Then fixing its head against the ground it shortens its body again and draws its tail up to its body, and while it does this you will notice that its body becomes thicker again. In this way the animal has shown itself to have the power of forcibly altering its shape in a particular way to attain a definite end. All through this process the bulk is the same, only the form undergoes change. If the worm had been large enough, we might feel that its body becomes harder and firmer the shorter it becomes. Now the changes which you see in a worm, which is a hollow muscle, are essentially the same as those which take place in the muscles of our bodies. Looking on muscle, then, as having this great capacity of contraction, let me remind you that all that which we usually call flesh is nothing else than this muscular fibre. What we eat in animals is almost invariably simply their muscles, whether it be a sirloin of beef, the breast of a chicken, a slice of salmon or the claw of a lobster. If you look at a ham in a grocer's window, you will form a good idea of the arrangement of the muscular fibres, how they are intersected by white lines or streaks, showing the separation of the different muscles one from another. So also is a leg of mutton; you will see that the slices are divided into separate portions or muscles. If we make a careful dissection of the muscular mass of our bodies, we find it divided into 400 separate muscles of various sizes and different shapes. Some are broad and flat, some rounded and cylindrical, but all have an arrangement at each end for fixing them to the part from which it is intended to act. These leaders or tendons pass from the muscles to the bone, and we find that the bones are roughened and thrown into ridges at the point of attachment. It is important to bear this in mind, as the bone tends to grow out where the greatest strain is thrown upon it, and thus the growth of bone goes on side by side with that of muscle. The muscular tissue arranged so complexly constitutes a large proportion of the bulk of the body, and I must remind you of the great service which its contraction affords us. Not only are our voluntary movements produced in this way, but all the vital processes depending on movement, and which are beyond the control of the will, such as the pumping of the blood by the heart, and the movements of the stomach and intestines in digestion, all these are in like manner dependent on muscular contraction. Further, it may be said that the subtle tracings of an artist's pencil, the tender shades of expression of a human face, can be produced by these muscles, and what are the forces that cause them to contract? No muscle can contract unless stimulated or excited by a nervous impulse coming from the brain or spinal cord. Every muscle has its own nerve which conveys the impulse to and from the brain. This impulse is not electricity, but is something like it, *e.g.*, note the action of a galvanic battery. Now we understand why there are so many different and distinct muscles in the body. Each has its own particular action according to the joints over which it passes and the part of the bone to which it is attached, and it is by the delicate interposition of one muscle or part of a muscle with another that we get all that marvellous variety and delicacy of movement which we call co-ordination, *e.g.*, action of raising the arm, effect on another muscle, &c. Hence we see that the exercise of one part of the body indirectly tells on that of another, *e.g.*, act of walking, with the swing of the arms, the balance of the body, the action of the legs. Before leaving the subject of muscles and their contraction, let me remind you of

the various points discussed. Muscles are the agents for all movements of our body by acting on the bones, that the growth of bone goes on with that of muscles, that they are very numerous, have nerves communicating with brain, and can be associated with each other to produce co-ordination, require a blood supply, the character of which is altered as it passes through the contracting muscle. This will help you to appreciate the changes in the respiration during muscular exercise. Heart beats quicker, breathe quicker, amount of CO_2 and watery vapour exhaled much increased, similar action takes place in muscle contracting. O taken in, CO_2 given off, and hence more work thrown on the lungs. More air is required and the blood has to be pumped more quickly through them. This accounts for the shortness of breath and beating of the heart which accompany muscular exertion. Value of deep breathing in weak chests. Danger of insufficient expansion. Benefit from active exertion—more especially muscles of the shoulder and chest. Important that those in charge of the young should see that anything like weak lungs, &c., should be prevented by healthy, free and natural exercise. Importance of fresh air during exercise, *e.g.*, ballroom filled with people, exertion equal to walking four miles an hour. During exercise the lungs should have the fullest possible play, clothing should be loose round the chest, influence of clothing as illustrated by soldiers and sailors in long marches. Effect on circulation.—Heart beat becomes more rapid and stronger at first, but if that exercise is too severe and too prolonged, or begun too suddenly, then the heart gets feeble and irregular We thus see that by physical exercise within certain limits, the blood will be circulated more efficiently and rapidly all over the body, and a healthy glow is produced in the skin. It is plain at the same time that unwonted excess and strain must act injuriously on the heart, hence the importance of beginning gradually and systematically any exercise which involves unusual exertion. We find the greatest number of strained hearts after the beginning of the summer holiday before the heart is accustomed to the increased exercise. There are some hearts that are weak from not having had enough exercise, and for those the best treatment would be systematic and regular exercise, slight at first, but gradually increased. Nervous system.—I need not appeal to you for the reasonableness of relaxation and rest to the brain if it is to fulfil its functions as the organ of man accustomed to hard open air work, and those whose bodies are toned with sporting pursuits and gymnastics are seldom with what are called nerves. Those who take no exercise also lose the inclination for what would be medicine to their bodies. So again, those who cultivate physical side to the exclusion of the mental are often characterised by lack of initiative and lack of control. Hence the great need for us to try to preserve the balance between the two. Many nervous disorders are brought on from want of physical labour or other exercises. Morbidness and moping are not the mark of an athlete. Up to quite recently there has been a tendency to sacrifice physical culture to intellectual attainments. As the brain is the chief organ of our mental powers, it follows that it is better served by a sound body than a weak and neurotic one, and the multitude of small dangers to which our bodily economy is subjected is more readily overcome by the physique accustomed to activity than that which is rendered flabby by sedentary occupations. We have a potent and sufficient means of health preservation, provided we put them into action and the cultivated will power of a balanced mind thought clearly and well, but I may yet dwell on the different ways in which relaxation may be afforded. To a certain extent and within certain limits mental rest is given by the change of subject, but after a time we find there comes the necessity for a relaxation still more complete and thorough, and nothing for this purpose can take the place of active physical

exercise. When one feels tired and listless after a spell of close and continuous mental work, there is no better remedy than some active and interesting muscular exertion which will make the lungs expand freely, the heart beat strongly, and the skin glow and break out into a full and free perspiration. We hear it said that brain and muscle cannot be developed at the same time. This is a narrow view. It is true that many athletes have been and are dull at books, that many intellectual men have had feeble and ill-developed bodies, but it is not true that there is any necessary connection between weak brains and strong bodies or between strong bodies and weak brains. The ancient Athenians have never been equalled for intellectual culture, and yet they made exercise and development of the body one of their chief cares, and the perfection of their men and women as handed down in their statues has been a subject of endless wonder even to the present day. Those who contrast mental and physical culture to the detriment of the latter forget that the brain, which is the organ of the mind, requires pure and healthy blood as well as any other organ, and if we can find any agent that will strengthen the heart and expand the lungs while it gives relaxation to the brain, surely it requires no further recommendation to be encouraged and upheld. In proof of this, one need only refer to the investigation on oarsmen of Oxford and Cambridge. It has been found that taking the history of each member for 10 years with reference to class honours, that not only was the average of the rowers as good or better than that of any equal number of men taken promiscuously, but that many of them stood in the highest rank in the classical and mathematical Tripos. Taking again the intelligence and ability of the working classes as a proof that hard labour and constant physical labour in no way tends to depreciate the quality and strength of brain power, but rather tends to foster it, I may point out that out of their ranks many of our greatest geniuses have sprung in almost every department of intellectual life. You will pardon me if I refer to such names as Burns, Hugh Miller, James Watt, Sir James Simpson, and Thomas Carlyle, as a proof that the working class has been the stock from which many of our best brains have been bred. And now a word or two on the effect of exercise on the tone and vigour of the body generally. It is one of the most beautiful principles in our bodily structure that the supply and demand are made to adapt themselves to one another in equal proportions. When a muscle is exercised, there is waste of tissue, but it receives more blood, and grows stronger, and is thus better able to do the work required of it, while when its use is no longer required, it loses its bulk and firmness, and becomes less fit for the work required of it. The arm of a blacksmith is rugged and strong, while that of a clerk is rounded and soft, but if the clerk were to turn blacksmith and the blacksmith, clerk, the aspect and condition of their arms would be to a considerable extent reversed—I say to a considerable extent, and not altogether, for it is one of the greatest advantages of physical exercise to young people that when the person is young the exercise he takes, or omits to take, will put a stamp on his frame which he will carry with him to his grave. If while the bones are soft and growing, the muscles are acting freely so as to open the chest and set up the frame work of his limbs, there good results will remain, although in later life the exercise should be discontinued, and if on the other hand while the body is still in a plastic condition, it should be allowed to grow up cramped and undeveloped, no amount of exercise when he is grown up will ever make amends for this early unfortunate neglect. As regards intellectual training, the two go together, but often they do not, and many a promising youth at college or school has fallen in after life into common-place mediocrity or premature decay from want of that even balance of energy of mind and body which a little systematic exercise in his early days would

have given him. Hence we may lay down that proposition that physical exercise is of the greatest importance to mankind throughout life, and in young and growing people its value is simply beyond calculation. Rules for regulation of physical exercise: 1, fresh air; 2, variety and mental stimulus; 3, should involve all parts of the body; 4, gradual exercise, leaving off when fatigued; 5, physical and mental exercise should alternate; 6, active exercise should be taken after a full meal. I can quite fancy some here to-night saying why make all this fuss about physical exercise. We had no regular gymnastics, no athletic clubs or football clubs, and yet here we are well and strong—why should not the young people now-a-days do as their fathers did? My answer is that we are now living at a much higher pressure than we were fifty years ago. The introduction of steam and electricity, the enormus increase in population, and the competition for all means of livelihood has increased at a similar rate. Thus a striving to excel one another has been a marked feature of our life, imposing on all a mental strain which our quieter forefathers knew nothing of. In olden times, when towns were smaller and business and professional life less exacting, it was easier to find time and opportunity to get out into the country and counteract the influences of confinement in towns. The facts are these. The country population is decreasing. Steam and mechanical apparatus are taking the place of the farm servant. The population of the towns is increasing, which brings with it a higher death rate, and the strain of mental life is much greater than ever, while it begins earlier and lasts longer in life. How are we to prevent the race from degenerating? Let me suggest fresh air, good food, pure water, and I add once more, healthy exercise, which will help us to have sound hearts, healthy lungs and clear brains.

The Strong Men of the Paris Markets.

By HAMILTON BLAIR.

Illustrated with Photographs by Messrs. Clarke and Hyde.

THE market places of Paris offer perhaps greater opportunities for sociological study than any other concentrated area in the world. Not only sociologically are the Parisian market places interesting, but as places where physical types may be studied their markets have no equal. Here are concentrated in one vast throbbing mass men and women of all classes. The peasant swings his gigantic figure through the crowd and hustles from his path the weak but striving person who has come from the boulevards and uncertain trading to something more tangible—speaking financially—though more exhausting.

Perhaps the best time for visiting the markets or the market is early morning. Alphonse Daudet, after his adventure in his first dress suit, went down to a café in the market and obtained a glimpse of the real workers of that wonderful city, Paris. After being mistaken for the Wallachian Prince he went down to Guidra's café—if such a curious establishment as Guidra's may be so called—and there in his miserable plight watched the curious beings who came and went or stayed in the somewhat stifling atmosphere. It must have been about two o'clock when Daudet entered this strangely humorous restaurant. The men never slept; from morn till night and back again they work, beguiling the hours with jests and half sung songs.

It was in a café, such as Alphonse Daudet mentions, that I met some of those almost Herculean beings that fetch and carry during the small hours of the morning whilst the rest of Paris sleeps, or at any rate is thinking about sleep.

The business in the market practically never ceases, but at times these human carriers are seen idling an hour away ensconced

behind a cloud of smoke seated on a fruit basket. About one o'clock in the morning the carriers of the Halles Centrales may be interviewed, that is, supposing he is not too tired to talk.

If he is in a good humour, and his tongue is by some subtle means loosened, he will tell you that he never feels really "done up." He now and again gets tired, but a quiet sit down and a peaceful smoke soon cures that. And as you survey his massive figure, taking in his enormous breadth of chest, his great arms and firm built legs, you somehow are not surprised that he does not mention sleep among the necessaries of life.

These load carriers have a certain right to be strong. Most of them in their childhood's days lived innocent lives away from the intoxicating air of Paris. In country villages they played and worked in the strengthening air, and probably being none too well fed they became hardy speaking physically. The luxurious living of a great city—even in the poorest classes of Paris luxury is found—had not undermined their systems, but with plain, honest, "straightforward" food had come the strength that was to carry them through life.

Thinking of French peasant life one's thoughts, unbidden, turn to that marvellous creation of Victor Hugo's, Jean Valjean. There is no one but Valjean, said the crowd, who can lift the cart from the dying man's chest; and Valjean, the escaped convict, gave himself up to his pursuers by raising the cart.

Even the men who bring their goods to market look wonderfully strong as they lift down from their places the heavy boxes that will be carried into the market and arranged for sale. These are the men who have succeeded under the new political state of affairs; the carriers are the less fortunate beings.

Previous to the Revolution, the life of the French peasant was anything but beautiful. The words of Mr. A. Young give a cruel picture to the mind. "The people's habitations are miserable heaps of dirt—no glass, no air, the women and children are in rags, no shoes, no stockings." To-day the peasant lives a clean and healthy life, which accounts

for his — generally speaking — physical perfection.

The carriers of the market place may well

be called the strong men of Paris. The amount of work done by one of these men during the day is something enormous,

almost baffling belief. From two o'clock in the morning until late in the day it is nothing else but fetching and carrying heavy loads. The hours of the evening are spent in packing goods or skirmishing in other parts of the town. To go to sleep would mean wasting so much time for earning money.

One must suppose that sleep is indulged in at some time, but when very few can say. It is curious to note the number of artists that lounge about the market places when the first grey streaks of morning come down into the streets. One would imagine that from among the group of strong men was to be chosen a model for Achilles, Hero or Hercules, and few better models could be found than the set of men struggling to earn the few francs necessary to keep body and soul together.

Comparatively the French market man is not paid so well as his English confrère, but so prudent and economical is the Frenchman that he can make his money go twice as far. He is bound to be prudent, for his strength must be kept up to a certain pitch or else he will be unfit for his work. Work must be done if the subtle wooings of the peaceful Père Lachain or the song of the syren Seine are to be resisted.

It speaks well for the good effect of simple living, to see these Parisian market carriers walking about innocent of all knowledge of their nobleness as animals. Miserably poor they work from day to day in the hope of—what? Ambition seems the least of all their faults, their desire to work the greatest of all their virtues.

The writer of this article has studied these men purely from a physical point of view, and is bound to confess that the average French worker in the market is above his average English confrère. I am also bound to confess that the superiority of the French workers does not stop here. As is the case, generally speaking, in all classes among those men, the mental standard, even as the physical standard, is higher than among the market workers of *le perfide Albion*.

In the illustrations accompanying this article, it will be seen that the men of the market increase their carrying capacity by the use of what might well be called ladders. These ladders are fixed on to the backs of the men by cords, and thereon are heaped the loads to be moved. Perhaps the best illustration of this method of carrying loads is furnished by the workers on the English quays. It will be noticed that the men who carry the gigantic boxes of fruit from ship to shore have at the back of their heads a kind

of pillow on which the case is rested. The French carrier has no such pillow, but in its place has his ladder, and of the two one

would imagine the latter was to be preferred.

It is in England supposed by many people that the workers in our markets have descended to their sphere and are obliged, if life is deemed desirable, to engage in this sort of work. In France, or rather among French market people, this is not the case. The carrier is not a degenerate, socially speaking, he is rather the outcome, the perfection of careful physical training, the training afforded by the struggle for existence.

Unlike many of his English confrères, the Frenchman has ambitions which may prove his making, certainly not his ruin. The tiny allotment in some not far distant village stands ever before him as a Paradise yet to be gained. Working hard, taking his pleasures soberly and quietly as only a Frenchman can, he hopes that Paradise is not far distant.

Few men, even among the best circles, can boast that they spend their lives so fully as do these workers of the market. The twenty-four hours of the long day furnishes them with twenty hours of hard labour, the remaining four are theirs to gambol with. The "night's repose" which their task accomplished has earned is hardly enjoyed, for those four hours are spent in pleasure—probably though the seductions of sweet sleep sometimes gains victory. As an example of endurance these men stand supreme, reminding one irresistibly of Tennyson's words, "Men the workers."

How many have admired you, O workers of the market? Your humble efforts, your steadiness and dreary plodding may have stirred greater minds to noble efforts, and by example given to the world, that most necessary of all lessons—patience—without which all is "vexation of spirit."

The Royal Academy from a Physical Culturist's Point of View.

By THE EDITOR.

GRANTED that the two main objects of the artist's creations are to elevate art and instruct by means of object lessons, I think it will be generally admitted that, taken all through, the exhibition of pictures at the Royal Academy this year falls far short of the ideal. As one passes from room to room, it is most noticeable that art is gradually but surely becoming submerged by capital, for on every side are seen, filling the space which would in years gone by have been occupied by instructive creations, portraits—good, bad, and indifferent—of persons known and unknown. In some rooms this is more marked than others, but in any case it becomes very monotonous to gaze upon picture after picture of persons in conventional costume who, by reason of their obscurity, do not appeal to such a casual observer as myself.

In this short dissertation I do not propose to criticise the exhibits from the point of view of art but on broader lines, and from the point of view of one who desires to see the public educated into taking a keener interest in their physical condition, an object which that eminent painter and sculptor, the late Mr. G. F. Watts, R.A., aimed at throughout his long and brilliant career.

And the mention of the name of Mr. Watts reminds me that, from a physical culturist's point of view, the Royal Academy Exhibition of 1904 may be summed up in a very few words and with an anomaly, for I think that the best thing *in* the exhibition is *outside*. I refer to Mr. Watts's last and greatest work, the gigantic and realistic statue representing "Physical Energy," the replica of which now stands far away on the Matoppo Hills, a monument to the memory of the late Mr. Cecil Rhodes. Standing in the centre of the small square facing the entrance to the Academy, much of the beauty and breadth of conception is lost, and one is apt to consider the work crude. But from a more satisfactory coign of vantage the work is calculated to inspire. Inside, however, there is little of that, the majority of exhibits being, as I have mentioned before, of the landscape or portrait order. Indeed, not more than half a dozen pictures are there which could appeal to the senses and call for more than a passing glance, except, perhaps, those of historical interest, and, of course, it is only natural that with a Britisher his country's welfare should attract. In this direction there are some portraits on canvas and in marble of their gracious Majesties King Edward VII., and Queen Alexandra, and a striking picture of the opening of the First Parliament of the Australian Commonwealth by H.R.H. the Prince of Wales, on May 9, 1901, which has been presented to the Commonwealth Government by His Majesty the King, by whose command it is exhibited. It is painted by T. Roberts, who has depicted in life-like fashion the great gathering, and I presume he has exhibited a similar amount of care in the depicting of the portraits, but for this, of course, I cannot vouch. Another picture of a somewhat similar character, but treated in very dissimilar

fashion, is "The City Fathers' Welcome to King Edward VII," by W. Hatherell. The artist has made the scene in the Guildhall a blaze of scarlet, which, if correctly represented, must have made it very trying to the eyes. Gallery VIII contains the one picture which, to my mind, is likely to inspire and instruct, and which it is pleasing to find has attracted more attention than any other work in the exhibition. I refer to "Despised and Rejected of Men" (No. 526), by Sigismund Goetze. The artist in his treatment of an allegorical subject has produced a creation which is striking in every way, although I should have preferred to have seen the central and chief figure treated rather more boldly, from a physical point of view. It suggests weakness. The colouring to the uninitiated eye is very fine, particularly the effect gained by the reflection across the faces of the setting sun. It is undoubtedly *the* picture of the exhibition. The tone of the exhibit seems almost to suggest a descent to something of the Watteau style, the absence of such work as characterised the conceptions of the late Lord Leighton, Sir Edward Burne-Jones, Mr. G. F. Watts, and the old masters, being most noticeable and regrettable. The President, Sir E. J. Poynter, Bart., who has given many fine examples, does not present us this year with anything very striking. "The "Nymph's Bathing Place" (No. 141) is a small picture of no special interest, whilst a still smaller one (No. 586), "The Sea Cave," is hidden away in a corner of Gallery No. IX, and looks as if it were merely an excellent study of foreshortening. Sir Edward's third picture, "Asterie" (No. 246), is a half-draped figure, which, from a physical culturist's point of view, is poor; the left hand and arm particularly. There is one artist who appears to have some of the love of his predecessors for physique, and that is Herbert J. Draper, who in his work, "The Golden Fleece" (No. 199), gives some excellent examples. That part of the story is chosen for representation by the artist when Medea, hotly pursued by her father, the King, orders her brother to be cast into the sea, with hands and feet bound, to drown, so that the King, to rescue his son's body, should delay his pursuit. The figures of the men straining at the oars of the galley are finely drawn, and the whole picture gives the suggestion of vital energy. We have to go to one of the few lady exhibitors for the best of the studies of the female form, Beatrice Offor, with the picture bearing the inscription:

"Long is the way
"And hard, that out of Hell leads up to Light."

The figure is well drawn, but I should have liked to have seen it stand out more from its background of rocks. R. Sauber has departed from the Watteau style with which his name is so closely associated, and has given us a large canvas containing an allegorical subject entitled, "Mammon." The colouring is very striking, but here, again, there is that absence of vital energy in some of the figures. After the famous picture by Sir Frederick Leighton. G. A. Storey's "Psyche" (Nos. 723) does not appeal to one in many respects. A glance through the water-colour and black and white rooms revealed nothing except a rather amusing mistake by one artist. In an otherwise realistic drawing of a Football Match (No. 1337), the game is being played under the Rugby code, but the teams are attired in the garb affected by those who play under Association rules. It is amongst the sculpture in the central hall and lecture room that the physical culturist will find most to interest him, and here there is some really good work. Two statues in bronze, by Alfred Turner, part of the Queen Victoria Memorial, Sheffield, representing "Labour and Maternity," are good, but the head of the man might have been a little more in proportion. There is a fine memorial statue by Thomas Brock, R.A., of Brigadier-General John Nicholson, who fell at the storming of Delhi, where it is to be erected in bronze. E. Roscoe Mullins presents a fine study of muscular development (No. 1691), but next but one to his creation is one by A. C. White

(No. 1693), a group entitled "Three Generations," which is quite the reverse, to the detriment, I think, of the work. The most noticeable work in the lecture room is "The Dancer" (No. 1837), by Bertram Mackennal, whose work in bronze stands out prominently. The President and Council have, under the terms of the Chantrey bequest, purchased several pictures of more or less merit, but none of them appeal so much to the aims and ideals which permeated Sir Francis Chantrey as the group in marble by Henry Pegram, entitled "Sibylla Falidica," the strong contrast in the two women's figures being very striking. "Sir F. Chantrey," says Mr. G. Jones, R.A., in his reminiscences, "believed that the mind and the morals are improved by the contemplation of beautiful objects." It is to be hoped that the trustees of the bequest, who are at present the subject of some very severe criticism, and a committee of enquiry, will bear this fact in mind when carrying out the duties of their trust, and so increase the desire for that perfection of form, at the same time bringing about an improvement in the moral tone.

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THE FLORENTINE POET. (*Cabanel.*)

Physical Culture as an Aid to Beauty.

By EUGEN SANDOW.

FOLLOWING on his article on "How Women may Gain Health and Beauty," which appeared in the *Weekly Dispatch* recently, Mr. Sandow, at the request of the Editor of the *Illustrated Mirror*, wrote a series of articles showing

how necessary physical culture is as an aid to the acquisition and maintenance of beauty, extracts from which we append :—

"ON DEVELOPMENT IN GENERAL.

"Here, at the start, let me say that physical culture does not entail, as very many people think, desperate gymnastic contortions, neither does it call for violent or prolonged muscular exertion. The physical culture which it has been my pleasure to teach now for many years, and which produces the most rapid and beneficial results, is a cult of gentle, light movements occupying only a few moments each day, and of such a nature that the frailest of delicate women may pursue it with equal pleasure to that enjoyed by her more robust sister.

"The desire for beauty of face and form has always been deeply implanted in the heart of womankind, and it is a very noble desire, too, for real, healthy beauty, achieved by natural means (I use the word "natural" as opposed to the doubtful beauty of a cosmetic and enamel order), is perhaps woman's dearest birthright.

"The beauty doctor whose object is achieved by powder and paint, and whose patient's eyes are made brighter by lotions, that lend an evening's sparkle only to leave them in the morning duller than before, would be doing his or her clients far greater good by putting them on the road to obtain beauty from within, for this cannot be washed off, nor cracked by an unchecked laugh, but lasts, and goes on increasing from

year to year, instead of being more difficult to stimulate, as is the artificial kind, with each succeeding season.

"Beauty consists roughly of two things, perfection of figure and perfection of face. But I fancy I hear a reader exclaim: 'How

can exercising my muscles improve my figure? I don't want to look like a strong man, I want to be nicely plump and supple.' To such I would reply: 'You will not develop obtruding muscles, for a woman's muscle does not develop like that of the sterner sex.' Female muscle is long, and its development in the arms, shoulders, and legs lends roundness and graceful symmetry, but never assumes the knotted cord type of prominence which characterises the shorter muscles of the male.

"Properly directed exercises can take off unnecessary fat or add flesh of a firm sort where needed. 'Salt-cellars' in the shoulders can be filled out, hips may be widened or rounded, skinny odd-shaped arms may be made plump and graceful.

"Not long since two ladies, sisters they were, came to me at my school in St. James's-street. The one weighed nearly seventeen stone, the other under eight stone. By means of physical culture exercises I succeeded in taking off about six stone of superfluous weight from the one, and added a couple of stone to the thinner of the two. A few minutes' daily exercise rightly taken achieved this without any diet restrictions or interference with ordinary habits of life, so you see it can perform what seem almost like miracles.

"So much for beauty of figure; but what about the face? How is the face to be improved by exercising? As a matter of fact, almost every one of the movements in my system has an indirect effect upon the muscles and flesh of the face. Again, the finest-featured face is spoiled if the complexion is bad. How directly beneficial exercise is to the skin I shall clearly show in a later chapter.

"Beauty is, moreover, greatly dependent upon the general carriage and demeanour of the whole body. Regular physical exercises, as well as remedying defects or building up an already good form, have the further important advantage that they keep the functions of the body regular and give a brightness and tone to the whole system which go more towards a buoyant carriage than anything else.

"The best time for the exercises is immediately upon rising, and they should be gone through with the bedroom window open.

"There are two kinds of exercise: (1) That consisting of what are known as 'free movements,' *i.e.*, without apparatus; (2) exercise with dumb-bells or a developer.

"Each of these kinds of exercise has its advantages, but for the average woman at home it will be best to make use of a light pair of my spring-grip dumb-bells and a combined developer on alternate days. The reason for this is that the will power exerted in making any movement, however slight, plays a most important part in the after-effect. The two pieces of above-mentioned apparatus I have devised with the object of equalising the amount of effort put into each motion. Nothing is easier in the desire to put sufficient will-power into a movement, than to very much overdo it, with most harmful instead of beneficial results. The gentle resistance of the rubber in the developer and the springs in the dumb-bell call unconsciously for just the necessary exertion at each exercise.

"After the movements, those who are blessed with a good circulation will do well to take a cold bath, but any who feel the least chill after such a bath should be content with a sponge down or warm bath or warm sponge down.

"THE COMPLEXION.

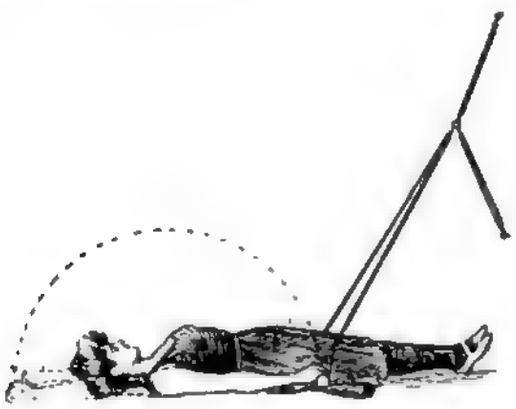
"The care of the complexion is no new cult, for more than 2,000 years ago Xenophon wrote: 'Men regarded a genuine complexion as most pleasing,' and they undoubtedly still do so.

"Few ladies realise that the health of the body depends very largely upon the skin, and, *vice versâ*, the state of the skin depends very largely upon the state of the body. The skin has a great variety of functions, the majority of which are generally overlooked.

It acts as a means of contact and communication with external objects by the sense of touch. As a protection our skin adapts itself most readily to circumstances, as may be noticed on the hands of labourers, where it becomes almost of the substance of horn in order to be able to protect the inner flesh from injury to which it is liable in the course of his calling; whilst that on the palm of the man or woman of leisure remains as soft as silk because it is not called upon to meet the strains that fall to the lot of the former.

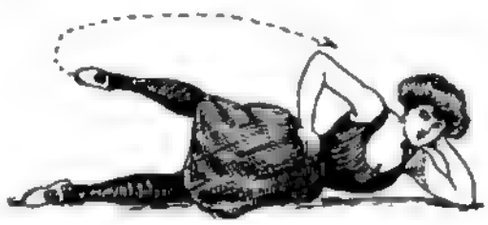
"The skin forms a perpetual medium of drainage of the whole system, carrying off superfluous moisture in the form of unconscious perspiration, and directly it becomes clogged in this work ill-health of the body results, and disfigurement of the skin appears. Now, the skin action in this drainage is muscular, and is directly connected with the circulation of the blood. That famous skin specialist, Dr. James Startin, of the Skin Hospital, in one of his books, writes that 'appropriate bathing and physical exercises are two of the greatest safeguards against both internal and skin diseases.'

"The skin has three layers—the outermost forms the protection, the second layer contains the fluid, from which the skin's colour is derived, and the third, or innermost,



is the true skin. It is this third layer which plays the greatest part as regards the beauty of the complexion. In it are the thousands of little channels which allow of the free passage of the millions of minute waste products which it is the skin's duty to discharge (all unconsciously to its owner) from its surface.

"This passing out of waste matter in the form of perspiration is carried on by muscular means, so here I come to the point of



why beauty is best achieved by systematic movements.

"If the surface muscles do not work properly there is a stoppage of the regular flow of the waste fluids, and they collect in the blocked-up passages, with the outward effect of a discoloration of the skin. Sometimes they create a sallow appearance, at others a too florid one, and more often than not the end of the matter is that the penned-up impurity forces itself outwards in the form of an eruption or one of those irritating and disfiguring pimples. At another place in the same book which I previously quoted the skin specialist says: 'The more exercise we take in the open air the better for our complexions; we, especially ladies, do not take half enough.'

"The demands of present-day society quite prevent the lady of fashion from getting sufficient open-air exercise for the preservation of perfect health in general and of her skin in particular. Even more so is the business woman, whose calling confines her to a desk in an office or behind a shop counter debarred. Here it is that physical culture steps in, for its prime value is that by means of long years of scientific study the exact effect of certain movements upon each particular function of the body has been discovered, so that it is possible, roughly speaking, to in ten minutes make a series of easy movements which crystallise almost all the same results and benefits which would be obtained from an ideal day of exercise in an open-air life.

"It is now quite a number of years since I

first commenced to urge upon the women of this country the home exercise substitute for the powder-pot and enamel-box, and it is most pleasing to note how many of society's leading beauties to-day have a really good skin obtained and kept in order by home exercise alone, instead of, as formerly, possessing bad complexions made to look good by the imperfections being covered by artificial means. These ladies either came to me for advice at one of my schools or were treated by correspondence from Basing House, and have found the improvement so marked, that now they would not miss their daily exercises on any account. Gentle massage of the face is most useful, and everyone may do this for themselves. Wrinkles can, so to speak, be smoothed away by light rubbing, and the exercises then restore the lost flesh and fat, for wrinkles come from a drying-up of the natural flesh and fat close below the surface of the skin.

"Before leaving the question of the complexion to turn to beautiful body-building, I must add a word which should appeal very strongly to every woman. By cultivating a beautiful skin herself she is laying the foundation of a still more perfect one in her children, for quality of complexion is hereditary, and, if properly treated, skins go on improving, if possible, from generation to generation. You may not, reader, be able to leave your daughter a pile of material wealth, but you can do much, very much, by a due care of your own physique and skin to enable her to feel that 'her face is her fortune,' and no small one either, for there is no limit to the power of a beautiful woman.

"FATNESS AND THINNESS.

"The inconvenience to a woman of being unduly fat, to say nothing of the loss of beauty it occasions, is too pronounced to need any emphasis from me. Which of us has not seen the appearance of a beautiful young woman quite marred, by her development, in but a few years, into stout, matronly proportions when she should be still graceful and lovely for at least another ten or fifteen years? I use the expression 'matronly proportions,' in its generally accepted meaning, for there is no reason why the matron should not, with slight modification, retain a figure to compare with that of the maiden. Just as rightly directed physical exercises will enable the matron to retain the youthfulness of figure, so will it, in cases of young and middle-aged who have allowed corpulence to creep unchecked upon them, act as a remedy and gradually remove the undesired avoirdupois.

"The loveliest features and complexion will not atone for, or overcome, the loss of charm which a woman must suffer who has the misfortune to be too stout.

"How to cure it is the question here, and there are several points to consider.

"Diet is the first which occurs to most people, and the general thing is to cut off all foods which contain fat or sugar. This is a great mistake. To moderate the amount of fat and sugar is most beneficial, but a proportion of these two is absolutely necessary in everyone's food. My advice in the matter of diet as a generalisation (for it is never safe in such matters to lay down hard and fast rules for everyone—individual cases of the same complaint need varied treatment), and it may be taken as usually sound, is to eat a moderate amount of an ordinary mixed vegetable and meat diet, being neither abstemious nor too free an eater. The liquid refreshment should be of a very moderate order, and beer of all kinds strictly eschewed.

"In some cases, but not many, the drinking of considerable quantities of water, either hot or cold, between meals, not with them, is beneficial.

"Exercise is, however, far more potent than even these simple diet restrictions. Dieting alone will seldom reduce obesity with permanent and sound after effects. Physical exercise without any dieting will often prove a perfect cure, and together with careful eating and drinking will, if properly undertaken, never fail to produce the desired

result. Violent or too prolonged exertion, such as taking very long walks, joining in athletic games which call for great activity, will do more harm than good. It is doing such things as these, when advised to take exercise, which makes stout people doubt, or

even disbelieve altogether, and throw up all idea of an exercise cure.

"The object of all endeavours to remove superfluous fat is to make the body eat it up by means of the process of destruction which is always taking place within that wonderful machine—the human body. It is no use to make it consume a greater amount suddenly than it can dispose of, which would be the effect of the violent games or spells of exertion mentioned above. No, we must begin with the gentlest and easiest of movements, and gradually increase their number and strength as the removal of the trouble allows, but never come to really stiff exercise until the body is in a normally sound state. By this time the patient will probably have acquired a liking for the exercise, and continue it as a pleasure and a builder up of sound tissue.

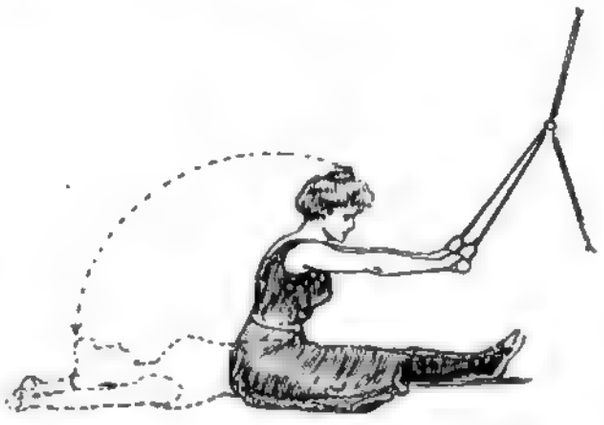
"Too much sleep should not be indulged in. Seven to eight hours is the best length of time whilst reducing flesh, and it is impossible to spend too much time in the open air.

"It is a very striking fact that the women of all the peoples who live natural outdoor lives practically never become stout, despite the fact that they may in many ways contravene the laws of health and hygiene. Surely this is a distinct natural proof of the efficacy of a regular exercise in the prevention and reduction of corpulence.

"The acquisition of good, sound, plump flesh is as necessary to the woman who is apt to be skinny as it is to her stout sister to dispose of her redundant supplies. Thinness is mainly caused by weak circulation, and hence ill-nutrition of the surface parts of the body. The inner and vital parts call for all the nourishment which the blood has to give. Exercise stimulates the blood flow throughout the whole system, and prevents the laxity of supply to the parts of the body nearer the surface. The renewed blood activity causes increase of healthy tissue, and so adds flesh and fills out the previous scraggy places.

"THE NECK AND CHEST.

"Few things are more annoying to a woman whose figure is otherwise good and whose face is attractive than to be possessed of a chest which shows the shoulder bones, or worse still presents to view a couple of 'salt-cellars.' Every time she goes to a dinner-party, dance, theatre, or other function she is confronted with the problem of how to hide this part of her anatomy, which should be, so to speak, the rounding-off and completion of her charms.



"Many a dress must be made high, or semi-high, and many a charming gown must be dispensed with because of the wretched shoulder question.

"Even wearing a high dress will not

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accomplished by gripping the surface flesh lightly between first and second fingers and thumb, and gently squeezing it as the grip is relaxed. The greatest care must be taken not to bruise the flesh by too firm a grip. The grips are made rapidly but always lightly

from place to place all over the part of the flesh which it is desired to fill out. This is a form of massage which athletes such as runners find most beneficial in keeping the muscles supple and fit. Many sorts of massages are valuable aids to beauty, but the active massage which exercise sets up is the most valuable. For the effects of the outward massage and the inward massage are, to use an Irishism, just the same, only that from within is more so. The stimulation of the blood flow is more natural after exercise than after the most skilful massage, and there being no getting away from the fact that beauty is a product of Nature, therefore natural means of acquiring it must ever stand ahead of artificial. The woman who leads a healthy and vigorous outdoor life will always have the advantage over the town dweller, but the latter can by physical culture reap benefits as near as possible to those enjoyed by the former.

"THE HIPS AND ANKLES.

"Perhaps the weakest point of the average English woman is the lack of the gracefully rounded hips which are enjoyed by her Continental sister, whom, however, she surpasses in many other points of beauty of physique and complexion. The hips can be developed equally well as any other part of the frame, but it is a matter of some time and more skill in the direction of the exercises. Whilst giving illustrations of several exercises which affect the muscles of the hips and thighs, I would in nine cases out of ten advise ladies to take skilled supervision of their exercises to this end, for a mistake made cannot be easily undone.

"The hip is the most difficult part to reduce in size, hence it must on no account be over-developed. Here I would insert a word of warning, which, whilst it may perhaps seem to border on the invidious, is yet necessary. The great success of scientific physical culture, which I have had the satisfaction of bringing to such universal adoption, has caused many inexperienced so-called professors to exploit the field solely for personal profit, regardless of the seriousness of the calling into which they have so lightly stepped. More I will not say than that in so important a matter as the development or health of any, or all, of the organs of the body, no mistake should be made as to securing competent instruction.

"As far as possible I have exerted my humble endeavours to enable everyone to obtain the benefits of my own experience. In

the columns of my magazine, at my schools, through correspondence, and by means of elaborate charts of exercises given with every pair of spring-grip dumb-bells and developer I have done my best to spread broadcast the best means of attaining physical perfection.

"My readers will probably have noticed that dancers are as a rule possessed of beautiful hips. This arises from the fact that the exercises which dancing teachers set their pupils as practice, in order to supple the hip joints, also develop the muscles of the upper

part of the thigh. One of the best which I would recommend ladies to try is to stand with the arms outstretched in a line with the shoulders. The palms of the hands should be turned downwards, and the body held rigidly erect. Now throw the right leg upwards sideways, taking care not to allow the balance of the body to be disturbed. It is not necessary to attempt anything in the nature of a high kick, in fact the movement must be a sort of pendulum swing of the whole limb.

"At first it will be found that the foot will only swing up a very little way; after two or three swings with the right foot repeat the same movement with the left. The number of swings may be increased each day, and ladies will find that unconsciously the height to which the feet swing becomes greatly increased. In fact, in a month's time they will probably find that the heels will, without much effort, touch the palms of the outstretched hands. However, no effort should be made to do this, the extra height of the swings must come quite naturally, and, of course, care must be taken not to lower the hand to meet the kick. Apart from developing a beautifully rounded hip, this exercise lends easy movement to the legs in walking and tends to that graceful carriage which is so fitting a complement to beauty of figure and face.

"Whilst on the subject of movement in walking, it will not be out of place to mention that every lady should endeavour to walk from the hip, that is to say, swing each leg forward from the hip, and not from the knee joint. Nearly everyone makes this mistake, and it is not easy to entirely remedy it. Only practice and care, assisted by such exercises as I have described, can do so.

"In cases where the hips are very deficient in development, and where difficulty arises in securing the extra natural 'padding,' it will be well to wear a weighted legging fastened to the leg just above the ankle. To begin with, half a pound will be sufficient, but this may be gradually worked up to 2lb. Each one's own ingenuity will doubtless devise a method for making these weighted leggings. Several whom I know have adopted the expedient of stitching into a woollen material several little leaden skirt weights, adding a few more from day to day. With these the same movement is made as above described.

"Swinging the legs backwards and forwards will also help, and backward and forward kicks for those who are able to undertake more vigorous means will be of some assistance.

"The arch of the foot is an important point of beauty, and the most shapely of feet are improved by a symmetrically arched instep. The best time to develop this is whilst girls are still in their teens, and young children may with great advantage be encouraged to run about with the heels off the ground. Whilst useful, this practice must not be overdone, but ten minutes a day trundling a hoop in this fashion will be none too much. For those of mature years a good exercise is to grip the ball of the foot with the hand, and to move it round from the ankle in a circle, say, fifteen or twenty times a day."

With the Camera on Scafell.

By WALKER AIDAN.

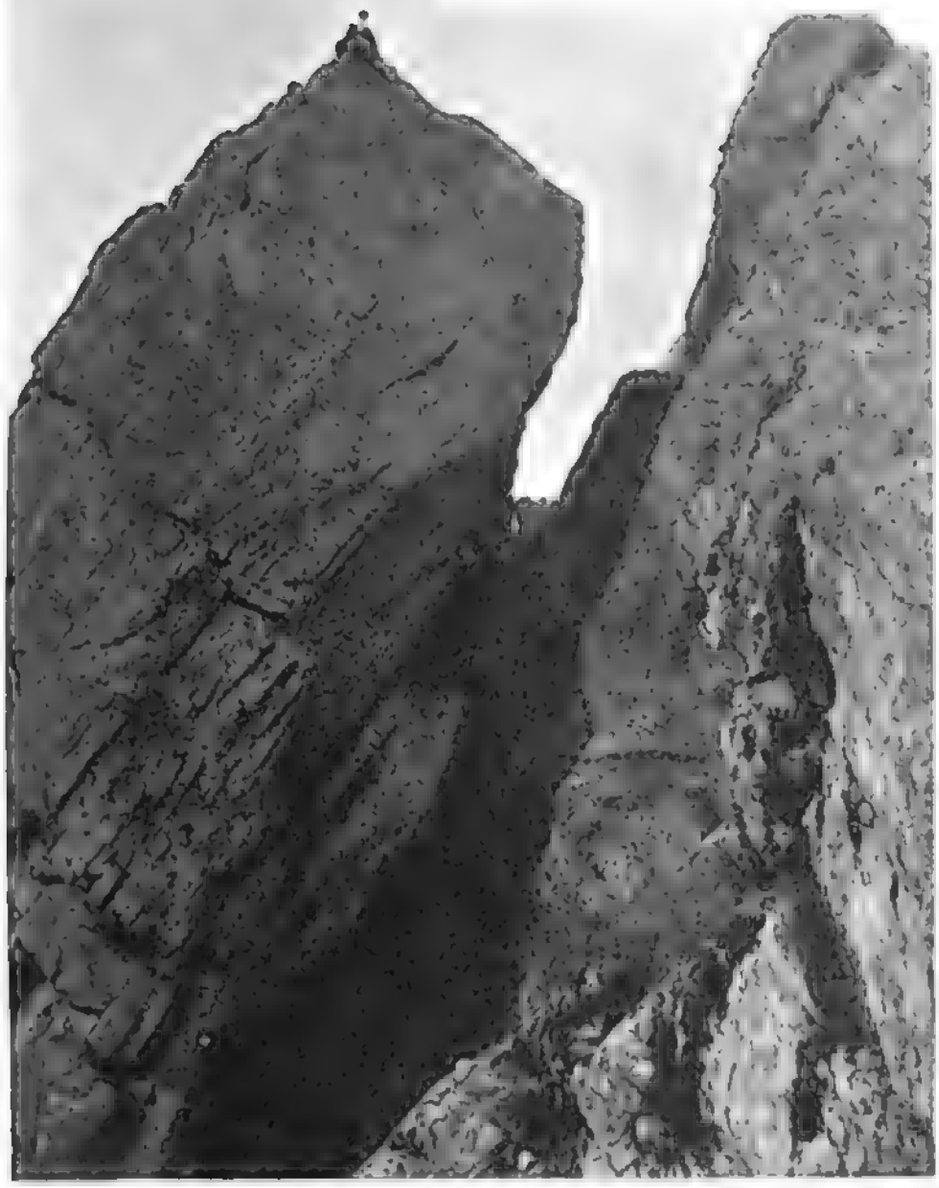

Photo., *A. Stores Walker.*

SCAFELL PINNACLE.

THE night's repose we earned by ascending Great Gable and "Snapping the Needle" proved to be, like a good investment, very sound, and we rose clearer in brain, rejoicing at the prospect of another day's climb amongst the rocky hills in the Cumberland Group.

"Night's candles are burnt out and jocund day
Stands tiptoe on the misty mountain top."

Campers are early risers—the fear of being disturbed by the tricks of comrades helping them to form this good habit. The sun is already warming the atmosphere, and ablutions in a neighbouring pool are suggested. Johnson, our captain, decrees that it is too cold to bathe, but finding the others don't agree with him, he keeps watch on the bank, ready to render assistance when the cramp he prophesies will come attacks the swimmers. Good old Johnson! How unselfish you are! Your virtue will be rewarded, but not to-day! Suddenly, there is a splash; and a man is in the water struggling to free himself from the embrace of a wet blanket. It is Johnson, and he makes a mental note as soon as he flounders to *terra firma*, that he has a new score to exceed against two practical jokers. He can afford to wait and does not let the impromptu bath spoil his appetite for a substantial breakfast.

"What has it to be to-day?" was the question passed round. Climbers are venturesome, and the failures of others only spur them on to attempt to scale the most rugged hills. Perhaps this was the reason Scafell,

which claimed four victims last Autumn, was unanimously selected. Harris, the invalid through yesterday's mishap, says he will go with us in spirit, but his sprained ankle tells him to look after the camp. Soon we are on our way up the valley. How clear the air is as we

"Go forth under the open sky and list
To Nature's teachings."

Who would believe the craggy summit of Pike o' Stickle is 2,000 feet above our heads, or that it is nearly an hour's walk to the dip in the rocks marking the top of Rossett Ghyll? But the eye of the experienced climber can measure distance between the "rock ribbed hills" and estimate climbing time accordingly. Too many people have been deluded into attempting the ascent of the Langdale Pikes after tea on an Autumn evening! Rossett Ghyll we know well, some of the party having made the toilsome climb a score of times, and for this reason we gladly assented to a proposal to digress *viâ* Bowfell. The route lies up the steep yet smooth, grassy side of Green Tongue, one of the buttresses of Bowfell. Just over the other side there is a fine and romantic gorge—Hell Ghyll, famed for its lovely combination of colour, bright-green moss, red rock, and sparkling blue water—a picture for the colour photographer. Soon Bowfell Crags appear above, but the top is enveloped in mist, which has been slowly creeping up the Eskdale Valley. Undaunted, we continue our upward march, and at length reach the summit just as the mist rolls away like a curtain and reveals the frowning crags of Scafell and the Pike, with the Mickledore chasm between. Forward we carefully walk along the crest of Hanging Knot, overlooking the chilly waters of Angle Tarn, of which those venturing to swim have teeth-chattering reminiscences. Then our course is over Ill Crag and Broad Crag, from which we catch a glimpse of Crummock Water in the dip between Great Gable and Kirkfell. Now the last Pike of Scafell confronts us, and a rush is made for the summit by the younger members of the camp, one of whom, scrambling to the top of the great cairn, has just wind enough left to proclaim himself the highest man in England! With Byron we can say, "High mountains are a feeling," but we don't believe "the hum of human cities is torture"—we work after our holidays.

Photo., *A. Stores Walker.*
THE FIRST PITCH—DEEP GHYLL.

Climbing this part of Scafell is comparatively easy to the experienced, so we decide to test our agility in the Mickledore. On the east side of this is a spring of the clearest water, around which we prepare for lunch, in view of the task before us. "Never climb on an empty stomach" is good advice which we never neglect. There are no

refreshment booths up Scafell such as adorn (?) the slopes of Skiddaw, nor is there any "Traveller's Rest" with the lines brightly painted, such as we remember in the North Countree—

> "If you go by and thirsty be,
> The fault's on you and not on me;
> Fixed I am here and hinder none,
> Refresh, pay, and travel on."

The bathing incident of the morning was not forgotten at lunch, when the two culprits were placed on plain rations by Johnson. Feeling on good terms with ourselves we wend our way down the narrow track leading along the crest of the Mickledore Ridge. This is about a yard in width; on the left a slope of scree extends into Eskdale, and on the right is the awe-inspiring Mickledore chasm, flanked on one side by Pike's Crag, and on the other by the grander crags of Scafell. Far down the scree at the foot of the cliff, sharp eyes can discern the cross erected to the memory of the late Professor Marshall, of Owens College, Manchester, an expert climber who met his death while photographing Deep Ghyll on December 31st, 1894. He rolled 130 feet down the side of the mountain, and unfortunately is not the only one who has sacrificed his life by mountaineering in this locality.

Gaining the further side, we next attack "Rake's Progress"—a narrow ledge running across the face of the cliff. The width varies from 2 feet to 6 feet, whilst the depth

Photo., *A. Stores Walker.*

THE SECOND PITCH—DEEP GHYLL.

increases gradually to about 200 feet, and then decreases again as the path descends. Amongst several stiff climbs "passed by" are the North Climb—a few yards from the Ridge, Collier's Climb, Moss Ghyll and Steep Ghyll further west. We proceed with the utmost caution along the mossy ledge, slippery with water from the springs above, until we enter Lord's Rake, a scree-shoot cutting deep into the cliff and running obliquely upward. A few yards up the Rake and on the left side is Deep Ghyll, the finest ravine on Scafell. Here you have an opportunity to—

"Halloo your name to the reverberate hills,
And make the babbling gossip of the air cry out."

The best view is obtained from the ledge of rock on the opposite side of Lord's Rake—the scene of a more recent accident. High up on the rocky wall on our left we can just discern the crack leading to Scafell Pinnacle. Our route now lies directly up Deep Ghyll. Johnson takes the lead and disappears within the cave under the huge block, and shortly emerges from a hole above our heads. Then he creeps upwards a few inches at a time until he stands on the scree above the pitch. This climb is rather trying, though short, but becomes easier with practice and is safe even for the leader, as the rope can be securely belayed inside the cave. A scramble over a few yards of scree and we reach the foot of the second pitch. Here a huge flat block has fallen across the Ghyll, effectively barring the way to all but experts. It is easier to avoid the direct route. On the left of the jammed block a leaf of rock extends down the Ghyll. Between this and the rocky wall is a narrow chink into which we thrust our fingers and crawl upwards in an attitude suggesting Darwin's ancestral theory! The chink ends in a small chimney in which the leader halts for a moment whilst our venturesome photographer, with his precious tackle poised on a very insecure ledge on the opposite wall, secures a unique impression. The situation can be readily understood by a glance at the illustration. Above this point is a steep stretch of scree leading to the flat top of the mountain.

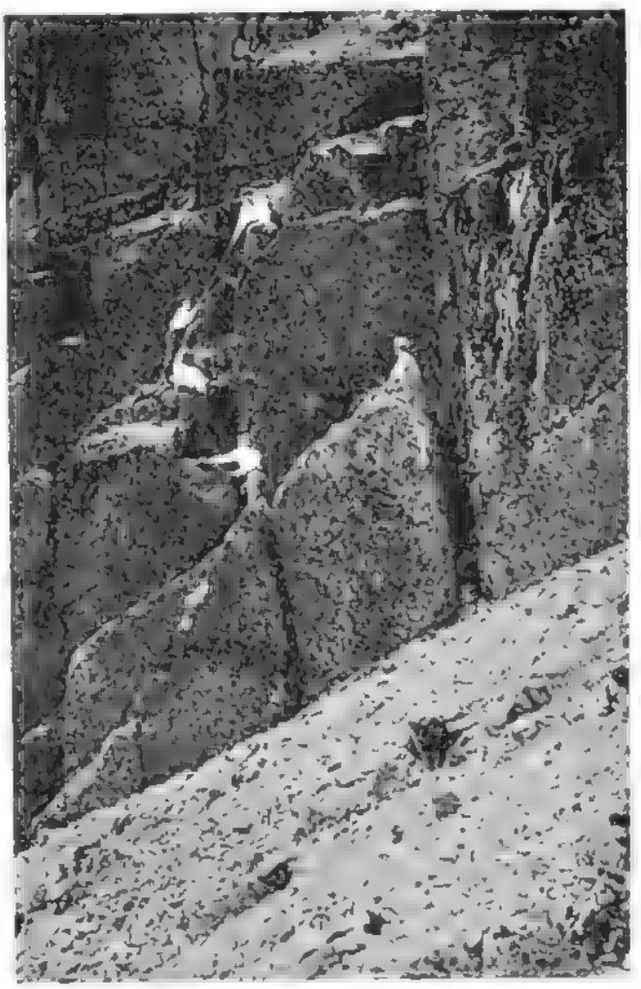

Photo., *A. Stores Walker.*

ASCENT OF BROAD STAND, SCAFELL.

But Johnson is far from satisfied. His eagle eye scans the surrounding peaks and he concentrates his vision on the summit of the Pinnacle, towards which he leads us at a brisk pace, at the same time reassuring the timid ones that he is not climbing the way the ill-fated party went on September 21st, 1903, when the four young men—Messrs. Jupp, Ridsdale, Garrett, and Broadrick, were killed. Our route is known as "the short way up," and has the advantage of providing an exciting if not a dangerous climb. Some care is necessary, for "the take off" is only a yard in width and the drop on each side several

hundred feet. There are no footholds, the entire ascent being accompli hed by arms and body; but the finger-holds are remarkably good, and Johnson has no fear as he swings on the end of the rock, with his feet dangling over Deep Ghyll, though our mathematician inopportunely informs him that by letting go he can reach the valley in $4\frac{3}{4}$ seconds!

Not desirous of testing the accuracy of this mental arithmetic, our leader exercises still greater care, and a moment or two later he grasps the little cairn on the summit and calls to his bosom the rest of the party. The ascent of the Pinnacle from this side is not difficult, although, viewed from Pisgah, the part of Scafell just opposite, it looks impossible. In winter, however, when every ledge is covered with ice, it is too dangerous to attempt, unless you have made your will and have had sufficient experience of this world! It is one of the exceptional climbs in which the descent is more arduous than the ascent. Regaining the mountain a walk of 200 yards brings us to the summit cairn where we pause, drinking in the beauties of the scene.

Photo., *A. Stores Walker.*

HELL GHYLL.

"The sounding cataract
Haunted me like a passion; the tall rock,
The mountain, and the deep gloomy wood,
Their colours and their forms were then to me
An appetite; a feeling and a love
That had no need of a remoter charm
By thoughts supplied, nor any interest
Unborrowed from the eye."

A glorious panorama lies stretched out before us; a foreground of bold rock is followed by a broad belt of pasture land terminated by the coast-line. Further still, in the path of the sunbeams streaming across the Irish Sea, lies the Isle of Man, whilst to the right and left the furnaces of Whitehaven and Barrow send curling to the sky the smoky reminders of man's handiwork. But the sinking sun warns us that we have another climb before us, and we must depart if we would be safely off the rocks before twilight. We make our way to the slight depression marking the beginning of the "Broad Stand" route—fairly easy to climb, but awkward to find from above, particularly in a mist. The descent consists mainly of several huge steps resembling, as one climber observes, "the massive blocks of stone forming the Great Pyramid." Our ever-watchful leader, like the famous duke who led his regiment from behind, assists each man with the rope, and after taking a last look round to see nothing has been forgotten, follows full of responsibility. At one point (where the lowest figure is seen in the picture) minute care is essential, for a false step means a long slide down the rock face, and an increase in the number of Scafell victims. As the countryman said of the Scotch express, "the danger is not in rapid travelling, but in stopping too

suddenly!" One of the party realises the danger, and very pluckily holds the leader by the waist-belt, drawing him to a place of safety.

"How foolish," remarked another. "If he had slipped he would have pulled you over." "No fear!" replies Croft, with a knowing wink. "Had he slipped, I'd have let him go." What a blessing a trusty friend is!

The last climb is ended and we get off the rocky ground before dusk, reaching Esk Hause just as the moon is rising and shedding its silvery beams over Mickleden Valley. Rossett Ghyll is safely negotiated and another half-hour enables us to—

> "Gather round the festive board as the bold
> Knights of old,
> And eat and drink and laugh and live and
> hear the tale that's told."

Our echoed wish, as we wrap ourselves in rugs and curl up on beds of fragrant brackens, is "Long life and many more camping holidays in good old Langdale."

MODERN PHYSICAL CULTURE.*

WE hardly know whether to treat the latest addition to the physical culturists' library from a technical or a historical point of view; but in either case, the volume, whilst to a certain point entertaining, falls rather short of our expectations.

The various systems now in vogue all receive their due meed of attention, that of Mr. Sandow being, in the writer's opinion, the best; but he has fallen into the common error of insisting that walking exercise is absolutely essential for those who take their physical exercises in the house. He says, too, that "the person who is out and about in the open air nearly all day long scarcely requires physical exercises at home," and quotes Montague Holbein as an instance. As a matter of fact, the famous cyclist and swimmer is a living argument to precisely the reverse of things, for he is, and has for years been, a follower of the Sandow system, as has been frequently stated in these columns.

The author is inclined, however, to confuse physical culture with weight-lifting and gymnastic display. It is neither; and to give space to describing how to develop the muscles of the neck and jaw by swinging heavy weights by means of a pad fitted into the mouth is to give a wrong idea of what physical culture really is. Space is also given to horizontal bar exercises, but they are, in our opinion, only fit for those who have already brought their muscular development to a sufficiently high standard to enable them to run the risks of strain which are so often present in gymnastic exercises.

In the chapters on Curative Exercises there are some recommendations which should prove beneficial.

There is plenty of interesting matter contained in the 120 pages, and it should prove a useful addition to the rapidly growing Physical Culturists' library.

* "Modern Physical Culture," by C. Lang Neil. Illustrated. Published by C. Arthur Pearson, Ltd., Henrietta Street, W.C. Price 1s.

Medical Men and Physique.

IT is a significant sign of the times that medical officers of health throughout the kingdom should at the present time be interesting themselves acutely on the question of physical deterioration, and the best means for bringing about an improvement. At a recent meeting of the Home Counties' Branch of the Society of Medical Officers of Health, Dr. H. Beale Collins, Medical Officer of Health for Kingston-on-Thames, in his Presidental address, dealt almost exclusively with the all-important subject, and his remarks on the subject of national physical culture are full of pregnant facts, which should be well considered by everyone who has the welfare of the nation at heart.

Dr. Collins opened his remarks with the expression that the foundations of Empire rest on the individual, and the permanence of the Empire remains assured whilst every individual is physically and morally sound. Moral health, he said, is so inextricably interwoven with physical health that it is hard for either to stand alone. Now, if in an Empire there be moral unsoundness, national degeneration is not far away, whilst even a commercial empire may have to fight for life in the last resort, and the battle will be won by physical health. In the old days, the countryman was strong enough and sufficiently intelligent for the military requirements of his time. To-day we require great physical and mental alertness, not only for soldiering, but also for the industrial competition that daily grows keener between the nations. The speaker pointed out that every 70 per cent. of our population is now urban, and to this he attributes the fact that although there has been no lack of would-be recruits during the last five years, 113,884 recruits have been rejected as unfit, and it is generally believed that the sources of recruiting are exhausted. He asks where could we find men to fight a nation of soldiers with a bigger population than our own. Amongst the well-to-do, perhaps, the recruiting sergeant could find young fellows physically fit for his purpose, but the numbers are limited. As man rises in the social scale the size of his family seems to decrease. The calls of respectability upon the purse are very great, so the thrifty man leaves it to the improvident to supply us with the thews and sinews for the next generation. Unfortunately, the improvident are so hampered by heredity, environment, and lack of opportunity, that those of their children who survive infancy and reach adult age are physically of little use for Imperial purposes. Imperial purposes are both civil and military, and though it is from the latter standpoint that defects are most obvious, it stands to reason that industrial enterprise can be better carried on by men of good physique than by weaklings. Is not the success of Germany in commerce, in spite of the burden of military service, in no small part due to that very military service having improved the physique of her sons? The hardened muscles of the soldier prove a great advantage in commercial undertakings. We may joke about our phantom army corps, and our ships that cannot put to sea for want of stokers, but we wish the joke were impossible. It is not because there are no idle men to fill the vacant places, but because the idle men are wastrels, partly through their own fault, no doubt, but largely because we do not take sufficient care of infant life, and because we begin to use the human machine before it is properly developed. In the industrial classes the child begins work at fourteen, or even earlier, at ages when the well-to-do children are still at school, developing physique by exercises and games in the open air, sustained by decent food, and not worked too hard mentally. If we find it more economical to finish a machine of steel and brass before setting it to work, is it not at least desirable to have the same regard for human machines worked by flesh and blood.

Dr. Collins drew attention to some

interesting records made by Mr. S. R. Brown, of Epsom, from which it appeared that whilst during the last five years there were 32·1 per cent. of rejections amongst recruits of 18 years and upwards, during the same years the boys at the same ages at the Epsom College below the standard only averaged 14·3 per cent. At the school all boys were examined, whereas for recruits only those who considered themselves fit for military service underwent that test, and of them 64 per cent. were drawn from the agricultural labouring classes. The figures from Epsom also show the great improvement during the later years of boyhood, for at 15 years 27·4 per cent. were below the standard for entry to naval training ships at the same age, so that an improvement of 13·1 per cent. is shown in three or four years of school life. Dr. Collins also drew attention to some remarks made by General Ian Hamilton upon the physical fitness of men after campaigning on the high veldt, that officer expressing the opinion that the lasting benefits of such a life could only be fully acquired by those who were fully developed before arriving in that splendid climate, which emphasises the contention that the deficit in development in early years, due to slum life, under-feeding, and similar causes, must lead to further waste, owing to the inability of the under-developed to take advantage of good conditions, as well as their liability to suffer injury from bad surroundings.

The lecturer proceeded to point out the necessity of open spaces and sanitary dwellings, giving a large number of statistics bearing out his contentions. He also condemned the present system amongst the poorer classes of bringing up their children with entire disregard of hygiene, also the early age at which infants are sent to school. He suggested as a substitute for the infants' department of the elementary schools, communal nurseries for children from three to six years of age. These nurseries would be managed by lieutenant-mothers and not by schoolmistresses, and they could be utilised for teaching the bigger girls in the elementary schools much that would be of use to them in after life. At six years of age the children would leave the nurseries, and would go to school as at present, but Dr. Collins lays great stress on the fact that careful supervision should be given to their physical development. He advocates the scheme so frequently expounded in these pages of a proper system of measurement, and superintending the physical exercises, so that the delicate and backward children could be specially cared for, and be enabled to eventually arrive at the same standard of physical excellence as their schoolfellows. Improper feeding was also fully dealt with by Dr. Collins, and he lamented that the children of the poorer classes in this country can leave school at thirteen, and that we should permit the system of minor torture to "half-timers," which unfortunate little wretches, having earned a few pence for their parents to spend in the gin palace, are sent drowsy and tired to the schoolroom to make a pretence at learning. There is no reason, he said, why people should not drink in moderation if they can afford it, but the ordinary man earning a weekly wage has not enough money to buy liquor, unless he drinks at the expense of his child. Moderate drinking may in this way affect the young people by depriving them of the nourishment necessary for full physical development. He pointed out the different conditions under which well-to-do children are brought up; they are kept at school till the age of eighteen, exercising and training their bodies as well as their minds. Eighteen is the youngest age at which it can be said the human body is a finished machine, but if we could go with improving the bodies of the workers up to sixteen, we should be making great progress; there would then be fewer breakdowns in young men, and consequently fewer recruits to swell the ranks of casual labour, and we may hope to hear no more of the cry, "Too old at forty"—an age at which the professional man is in his prime. He pointed out that for filling

the requirements of vast places in the tropics that are being opened up for our sons, large numbers of virile men will be wanted to do the work. The constant supply of these men of good physique is one of the requirements of the future, and must be prepared for.

The lecturer gave some very stringent rules which he suggested would bring about the accomplishment of his ideal of physical perfection, viz. :—

1. Every mother during her years of child-bearing must be placed in such circumstances that she has no need to do any work beyond the duties of her own household.

2. Following on this, every man worker must be in receipt of sufficient wages to keep his wife and family without calling on them for assistance.

3. Every child must be kept clean, well fed, well clothed, and in healthy surroundings, if possible up to the age of eighteen years, but, at least, of fifteen years.

He pointed out that it was impossible to carry all these counsels of perfection into effect at once, but he thought that the present wave of Imperialism seemed to suggest an opportunity for making a beginning in a small way with No. 3 for a limited number of boys, and as soon as the success of the experiment became evident, the nation would realise the true economy of not working the human machine till it was finished in every part and firmly fitted on its bed-plates of sound physique. He suggested that a certain number of boys at thirteen or fourteen years should be taken from every elementary school, and brought up under healthy conditions, free of cost to their parents, on condition that they should give a certain number of years' service to the State, as seamen, stokers, and soldiers. He went on to say that surely it would be wiser and cheaper than building sanatoria on wild hill-side to cure people who have become ill because they have not lived sufficiently in the open air, to take young people out of the crowded towns, away from the workshop and mine, and bring them up in the open air, to making their bodies resistant against disease instead of trying to cure them when attacked.

After pointing out the large tracts of land awaiting cultivation, Dr. Collins dealt with physical culture, for which he had some good words to say. Pointing out that "your muscles can be developed by correspondence, and that physical culture systems do not seem to be other than good in themselves," he advocated a system of health-camps for boys, where they would receive proper training under healthy conditions, and so get rid of much of the drunkenness and vice which everyone deplores, and which so many pretend to believe is inevitable, but which is really the result of imperfect physical development.

Dr. Collins has some hard words to say against those who neglected their own and their children's physical welfare, and said :—

In a really well-ordered State premiums would be offered to the patriotic parent who brought up his children to be perfect citizens. For every child reaching a certain standard of physical health parents have denied themselves much, and given time and thought to achieve the result, yet the State gives them no more recognition than it gives the careless, the foolish, and the worthless, who in middle life have families fit only for the sanatorium, and only their wrecked selves to offer for the service of the State. Why should not the parent bringing up a child to adult perfection be given a remission of taxation for a year! In bringing up his family he has paid for better food, greater air space, and higher education, and why should he be treated in the same way as the careless liver, or the selfish bachelor, who contributes no effective units towards the continuance of the Empire.

Athletic America.

(From the *New York Herald.*)

IT is not so long ago that Young America was cartooned as a tall, lanky, narrow-chested fellow, who had been reared indoors chiefly and was utterly lacking in the broad shoulders and muscular development of his athletic English cousin. Pie was described as the national diet and dyspepsia as the national game. Miss Columbia, too, came in for her share of physical ridicule as a hothouse young woman living in super-heated rooms all winter, set out on the country-house piazza with the plants in the springtime, and taken indoors again before the first autumn frost.

There was foundation for this caricature of the non-athletic American young man and young woman of a generation ago. There were a few enthusiasts among the men who did something more than box or fence in a gymnasium, and a few young women who didn't mind being called tomboys if they indulged in outdoor exercise. But they were few and far between, and as for athletic clubs—why, many of the greybeards of to-day remember when half a dozen men met and proposed to found the New York Athletic Club, which at first held its business meetings in a small hired room and its games in a vacant Harlem lot. And this was not so long ago either.

Polo was unknown; a hunt club was undreamed of; rowing was confined to the scant few; baseball was played principally on street corners or in a suburban meadow; track athletics were in their infancy here; bicycling had not been introduced, and a handful of men with monocles indulged in cricket and said "By Jove!" at intervals. Lawn tennis was an undiscovered game, locally, the most exciting lawn sport of the day being croquet, since given over to nurse-maids and children; golf was only heard of when two or three old Scotchmen got together and grew reminiscent of "auld days at hame," and one had to go to Canada to see a game of lacrosse.

Was it a wonder that Young America if six feet tall was only thirty-two inches broad—or narrow? And that Miss Columbia, pretty by gaslight in "the lancers" or the old-fashioned waltz, was anything but an inspiring figure under a noonday sun if she took an oar in hand or attempted any out-door exercise?

What a mighty change has occurred since then in American manhood and womanhood! What a physical upbuilding has been accomplished in the few decades during which the young people have taken to the open and learned what keen enjoyment and splendid health are to be gained in outdoor sports!

There is one day in the year—May 30th, or its neighbouring day if the date falls on Sunday—when the increased and vast public interest in open-air games is particularly apparent. This day, by common consent, is the greatest sporting date of the year. Hundreds of athletic and other meetings are held in and near the great cities, and even the villages and hamlets have their local gatherings. The great number of clubs existing now is in wonderful contrast with the few that were in being only a few years ago, and there are thousands of participants in sports of the present to every dozen that took part a few decades since. In and near New York alone more than fifty clubs hold their sports where not half a dozen existed a generation ago.

There is nothing in healthful outdoor recreation that sturdy Young America of to-day and his charming, bright-eyed, gracefully developed young sister do not indulge in, and in some branches of sport they hold or will challenge world records. What a glorious change from former conditions, and what a grand promise for the future of the country!

Italy in London.

By F. NEVILLE PIGGOTT.

ITALY has always been looked upon as the home of physique, for have not some of our finest sculptures and pictures had their being in the bosom of the Queen of the Adriatic. Thus it is that Londoners and visitors to the metropolis are more than fortunate this year, for they are able to make a much closer acquaintance with all the beauties of Rome. Not in the neighbourhood of what is known as "Little Italy," I hasten to explain, but at Earl's Court, which this year has been retransformed into one of the most successful exhibitions ever held there. It is, without doubt, the most complete collection of artistic triumphs from the home of art that has ever been brought together, and apart from what may be considered in this case extraneous attractions, a visit to Italy in London will more than repay both the student of physical culture, and the admirer

"VENICE BY NIGHT."

of the beautiful. Given a day of brilliant sunshine, such as those experienced last month, and from end to end the exhibition breathes of Italy, for everything has been made in keeping with the country, and the surroundings are all faithful representations of some of Italy's most famous spots, and for the time being the visitor may easily imagine himself transported to the Mediterranean—all for a shilling! The Queen's Court, which is the first from the entrance in Warwick Road, has been transformed into buildings of stately Italian renaissance, representing the Queen's Palace and Ducal Hall, designed after the purest Italian art, and giving a grand architectural effect, whilst to the right and left stretches a wide expanse of typical scenery, representing a distant view of Rome, an Italian *loggia*, and Capri, this latter being the facade to the entrance of the Blue Grotto of Capri, whither you are carried through the stalactite-loaded subterranean cavern, on an artfully contrived circular stream of water. It is in this court that what may safely be termed the most novel structure of modern times is erected. I refer to the captive flying machine invented by that great engineer, Sir Hiram Maxim. The famous gunmaker has long interested himself in the question of aeronautics, and as a mild form of the exciting experience of flying through the air, his invention is the nearest approach the public has as yet been able to test It is certainly a novel experience to be carried through the air at a speed varying from 20 to 30 miles an hour, and at an angle of 30 to 40 degrees, and the sensation is equally as novel to the spectator, who, unless he considers the question of gravitation, feels that the passengers must fall out of the cars during their giddy flight. In the same garden is the chute, which vies with its new rival for popularity, and is always a source of amusement and attraction for spectators who throng the sides of the lake to watch the loaded boats come hurtling down the steep slide, and join in the shouts of amusement as the craft dashes into the water, drenching its occupants with spray. The Ducal Hall, which leads to the Queen's Court, is set aside for Italian commercial exhibits and fine art works, including the famous pictures of

SHOOTING THE CHUTE.

QUEEN'S COURT AND THE FLYING MACHINE.

ancient and mediæval Rome painted by Cavaliere E. Roesler Franz, and a group of oil paintings by the celebrated Veronese artist, Dall' Oca Bianca, besides a collection of bronze, terra cotta, and marble works by the well-known Roman sculptor, Constantine Barbella, all of which will appeal to lovers of art and physique. By the way, the Roman sculptor's name will no doubt recall to readers the *nom de plume* of a regular contributor to SANDOW'S MAGAZINE. Reverting to the second of the three artists mentioned, I may quote the high tribute paid Bianca by Professor Colombo, who, writing on the Art of Modern Italy, says, "For many years Dall' Oca has striven to give to art a meaning and a bearing quite serious and in agreement with his many experiences. He has enquired into the truth with great love and passion, and in his

THE BLUE GROTTO OF CAPRI.

conceptions and executions he has aimed always at the most lofty ideals of life and nature."

Cav. E. Roesler Franz's collection consists of eighty water-colours, representing the most characteristic places of mediæval Rome, which, owing to the demolitions for safety and sanitary purposes, as well as for the embellishment of the capital of Italy, have undergone a most substantial change, so that it can be stated that the pictures are for the major part the only testimonials of the real aspect of Rome before the works were carried out.

himself to the above subject, except one, Mr. E. Roesler Franz. It affords me great satisfaction to see that the idea of retaining memoirs of the past has struck this Roman artist, who has happily guessed that a work of this kind would not only prove artistically interesting but historically necessary."

Gregorovius ends his letter by soliciting the Royal Academy of St. Luke to afford their patronage to Mr. Franz's work. In a letter to the artist himself (Rome, June 6th, 1883), Gregorovius writes:—"The water-colour you made for me will daily recall to my mind your magnificent collection, and I

THE ROMAN GARDEN.

Ferdinand Gregorovius, the celebrated historian, in one of his visits to Rome (1881) addressed a letter to the President of the Royal Academy of St. Luke on the subject. After stating that Rome was undergoing one of the greatest historical changes in its old appearance, and that ere long it would pass out of the minds of the Romans themselves unless art came to the rescue by keeping some record of the past, he writes, "I regret not to know any artist in Rome devoting can assure you with your paintings you rendered a most important service to the advancement of Roman culture. Your paintings, which will be followed by others of the same kind, will be known and admired as historical documents of the town long after my own writings shall have been forgotten, inasmuch as works of art have the advantage on written history that, whilst the former reproduce Nature itself, and consequently lose nothing of their intrinsic value in course

of time, the merits of the latter are greatly impaired, partly on account of the change in public taste and ideas, and partly owing to the new materials which come to light showing the inadequateness of historical writings."

These pictures form part of the first series now belonging to the Municipality of Rome and kept in the Communal Palace at the Capitol. In 1889 the Royal Academy of Berlin awarded a gold medal to Mr. Franz for this part of his collection.

In 1897 a show of the second and third series of these water-colours (here displayed) took place in the Foyer of the "Teatro Drammatico Nazionale" in Rome, and proved a very great success, so much so that the Royal Academy of St. Luke, through their president, expressed in a letter to the Syndic of Rome their vote that these two series of Mr. Franz's pictures, which represented, both historically and artistically, a complex of valuable souvenirs of admirable executions, should be also bought by the Municipality. Later on negotiations were started to that effect, and brought on to a very satisfactory stage; but the straitened financial conditions of the Commune of Rome have prevented them from purchasing these two last series.

Under such circumstances, all students and admirers of the history of the Eternal City will easily understand the importance of this Collection which are now shown for the first time in this country.

By far the greater portion of the exhibits in this hall are those of Lombardy. There, characteristic marble work, artistic furniture, beaten iron work, lace from Venice and other parts largely predominate. Such a land of brilliance could hardly be said to be represented, without a good display of wines. These are here in every pleasing variety. An exhibit that must not be overlooked will come with special interest as one of the great inventions of latter times. This is a model cabin showing a complete installation of the

THE GREAT WHEEL.

BEAD MAKERS.

Marconi apparatus for wireless telegraphy. There are many other exhibits of artistic and scientific interest.

The Queen's Palace on the opposite shore of the lake contains some of the most superb work of the Italians, including manufactures and products from Rome, Naples, Florence, Venice, Milan, Turin, Carrara, Sorrento, Sicily, and other places. There is sculpture in marble, bronze and terra cotta, beautiful carved wood-work, art furniture, fine art jewellery, majolica, not to say anything of damasks, silks, and antique and modern lace. The famous *intarsia* work of Sorrento, work in iron and leather, with pharmaceutical products, wines and liqueurs are freely displayed, while the Venetian beads, photographs, reproductions of pictures, books and book-binding will also be found characteristic.

Crossing to the Imperial Court one passes through the Empress Hall, wherein is situate one of the cleverest pieces of scenic effect ever devised, representing Venice by night, a photograph of a portion of which graces the title of this article. To those whose good fortune it has been to visit the Queen City of the Adriatic, this representation is full of pleasant memories and reminiscences, for here we have the gondolas plying, thirty-six specially imported from Venice being in use

KITLENE
This Model of
St. Peter's Rome
cleaned and polished with Kitlene
Furniture Renovator is now on view at the
Italian Exhibition, Earl's Court.

WESTERN GARDENS AND THE LAGO MAGGIORE.

to carry passengers over the 1,356 yards of canals which have been constructed. Meanwhile the guitar and mandoline orchestras tinkle merrily, or anon one of the troupe renders a typical Italian melody. Without doubt, it reproduces in faithful detail the beauties and characteristic features of the real Venice. Coming out into the beautifully arranged grounds of the Imperial Court, here we find exhibits by some of the leading firms of Rome, Naples, Florence, and Venice. Their exhibits comprise specimens of the principle art industries of these great cities. As might be expected, there is a very fine display of sculpture in marble, bronze and terra cotta, both antique and modern, paintings of interest, artistically carved wood, majolica, and furniture, fresh from the hand of the artist-craftsman. I am able to reproduce a photograph of one of the handsome collections of marble sculpture.

Surrounding the Imperial Court is another exhibition which must appeal strongly to physical culturists as well as lovers of art, for here is a collection of works by the best modern Italian artists. The connoisseur or lover of pictures can here alone spend hours and feel amply repaid for his visit. There is much left to be seen yet, however, for we have to pass through the Italian village, with its faithful reproduction of the Pergolatia Garden with its vine trellised pillars, and theatre with its continuous variety entertainment, the Venetian glass-blowers with a furnace in full work, besides many other side shows, not the least interesting of which is the "Story of a Crime," as shown

TABLEAU FROM "STORY OF A CRIME."

GLASS BLOWERS.

in six tableaux of wonderful realistic grouping, and which should be seen by everyone, and the beautiful model of St. Peter's at Rome, executed in wood and ivory. It is claimed to be accurate in the smallest detail and, resplendent in its coat of Kitlene, is alike a source of wonderment and admiration. At the end is that marvel of modern engineering, the great wheel, which is too well known now to need description. We now come to the last and perhaps most popular of the series of gardens, viz., the Western. Here you may take a switchback ride past the beautiful Lago Maggiore, or gaze on the representation of the wonderful Isola Bella with its Italian garden, and meanwhile enjoy the strains of one of our finest military orchestras, apparently miles from London's smoke, and yet in its midst. The Farthest North finds a place here by the side of the Roman Forum, besides many another attraction, the whole making Earl's Court one of the most inviting spots in the metropolis and an experience never to be forgotten.

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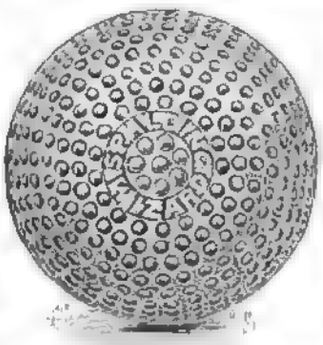

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SPORTING PATENTS.

In response to many requests, we have pleasure in announcing that we have made arrangements whereby each month we shall be able to place before our readers a Complete List of Patents relating to all Sporting Appliances.

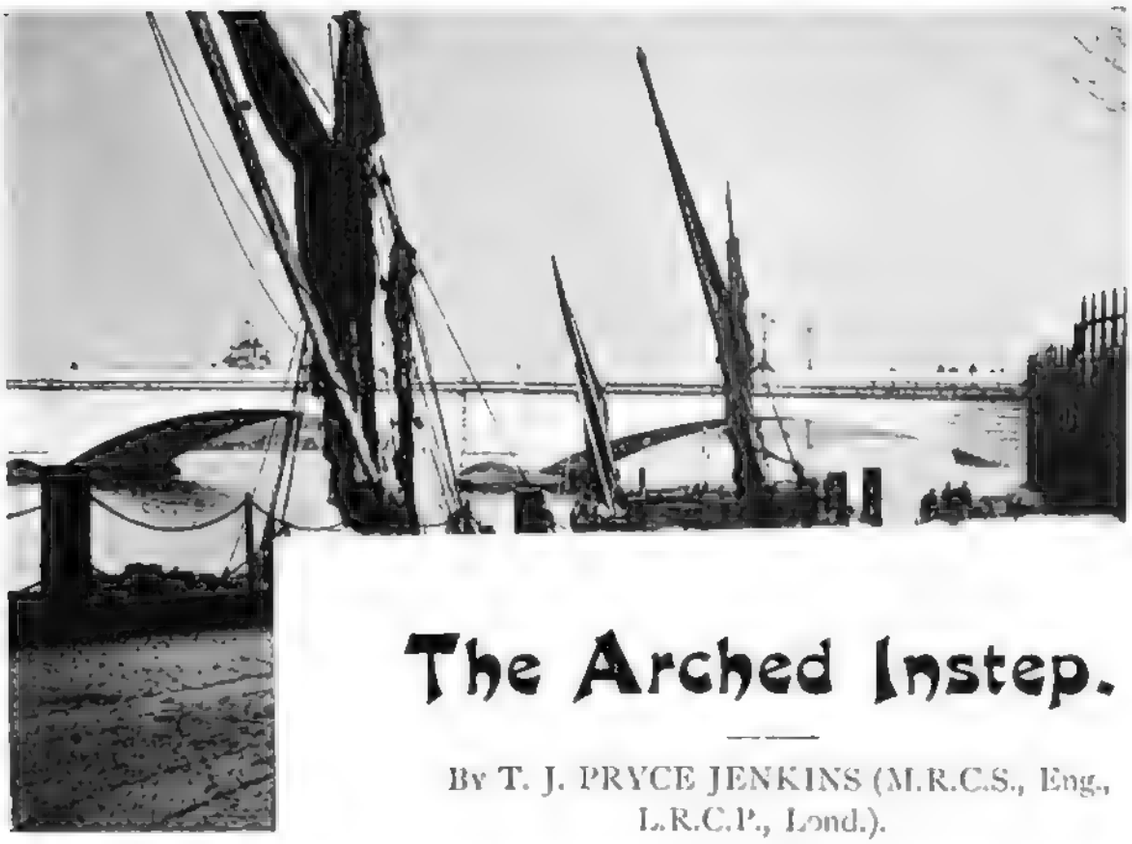
This List of Patents is specially prepared for SANDOW'S MAGAZINE by Mr. C. F. Ennis, of Jessel Chambers, 88, Chancery Lane, London, W.C., Registered Patent Agent, from whom all further information relating to patents may be had on application.

List of Applications for Patents during June, 1904 :—

12,404. D. McGill and E. F. Clarke, Birmingham. Presses for tennis racquets, &c.
12,412. H. Heather and E. Hartley, St. Helens. Billiard cue tips.
12,511. P. H. Haddlestone, London. Moulds for golf balls.
12,661. E. L. Curbishley, Manchester. Handles of bats, clubs, &c., used in sports.
12,674. W. Cunningham, Glasgow. Golf balls.
12,685. C. E. Player, Penryn. Cue tips.
12,800. J. Hillyard, London. Golf clubs.
12,949. F. Burks, Manchester (C. Rohlfs, U.S.A.). Electric apparatus for exercising and therapeutic purposes.
12,996. A. J. Newton, London. Ball punching apparatus for athletes (complete specification).
13,076. W. P. Thompson, London (D. H. Stubbs, Singapore). Tennis racquets.
13,118. J. P. Cochrane and J. Jackson, Glasgow. Machine for winding rubber and golf ball cores.
13,265. F. W. Cox, London. Billiard cue cabinet provided with marker or scorer.
13,294. C. and O. Wyers, Birmingham. Fish landing net.
13,304. W. H. Mason, Birmingham. Boxing apparatus.
13,307. W. Nichol, Glasgow. Golf clubs.
13,350. P. F. Jayne. London. Fishing device (complete specification).
13,381. W. B. Henderson, London. Pneumatic fitting for billiard cues.
13,449. G. D. Berry, Accrington. Apparatus for the support, levelling and final trueing of billiard, &c., tables.
13,512. A. L. Kendrick and T. F. Kenyon, Birmingham. Rings and fittings for fishing rods, &c.
13,551. W. H. Hill, Birmingham. Fish hook.
13,693. T. Nichol, Glasgow. Ball for ail games.
13,896. W. W. G. Webb and J. Hall, London. Targets.
13,898. W. J. and R. E. Baird, Liverpool. Golf clubs.
13,918. W. H. Pike, Manchester. Cleaning appliance for shooting targets.
13,929. R. Hodgkins, London. Golf ball and its manufacture (complete specification).
14,074. A. Winser, Southsea. Target machinery.
14,113. J. D. Dunn, London. Placing lead in wooden golf clubs.
14,114. J. D. Dunn, London. Metal plate for the soles of wooden golf clubs.
14,184. D. Murray, Brechin, N.B. Golf putter.
14,225. W. S. Simpson, London. Apparatus for practising catching cricket and other balls.
14,264. J. T. Cooley, London. Device for measuring the distance between balls, &c., in bowls and other games.
14,313. J. Carruthers, London. Golf clubs.
14,468. C. Lohse, London. Automatic hammerless guns (complete specification).
14,518. C. Monteath and J. Ormiston, Boswells, N.B. Billiard table cushion bar and time lock.
14,549. G. S. McClellan, London. Device for levelling billiard, &c., tables.
14,608. J. R. Brown, Glasgow. Golfing irons.
14,636. H. H. Cummings, London. Antedated. Target practice apparatus (complete specification).
14,701. R. R. L. Morgan, London. Golf and similar balls (complete specification).

Complete Specifications published during June, 1904 :—

4,445 of 1903. W. Mills, Sunderland. Tennis racquets.
6,551 of 1903. E. O. Thiele, Chemnitz. Cleaning and oiling device for rifles.
8,333 of 1903. R. A. Rogers, Marton Brading, I.W. Automatic rising and falling targets and marker for rifle ranges.
8,814 of 1903. J. Livitschak, St. Petersburg. Folding support for rifles.
11,478 of 1903. E. Cuthbert-Keeson, Hammersmith. Explosion concealing, &c., apparatus for rifles.
11,985 of 1903. E. H. Stone, London. Single trigger double barrelled fire arms.
12,115 of 1903. C. Baxter, London. Indicating the score in billiard and other games.
16,090 of 1903. C. E. Marks, Wilton. Running and disappearing figure targets.
16,338 of 1903. W. M. Short, Beckenham. Golf balls.
16,814 of 1903. W. Baker, Birmingham. Ejecting mechanism for small arms.
17,115 of 1903. W. W. Watts, Hendon. Spectacles or the like for use in shooting.
17,233 of 1903. A. D. Mitchell and A. Watson, Cellardyke, N.B. Manufacture of floats or buoys for fishing purposes.
4,895 of 1904. W. J. Davies, U.S.A. Antedated. Golf putters.
6,730 of 1904. W. H. Ell, Peckham. Mechanical recording targets.
8,301 of 1904. J. E. H. Hyde, New York. Tennis racquets.
10,056 of 1904. J. E. H. Hyde, New York. Fishing hooks.
10,567 of 1904. W. J. Travis, New York. Antedated. Golf balls.



The Arched Instep.

By T. J. PRYCE JENKINS (M.R.C.S., Eng., L.R.C.P., Lond.).

THE human foot is the only foot in the animal kingdom which has an arched instep. This may possibly be a reason for the pardonable pride so frequently displayed by the fair sex, who gracefully recline and allow a pedal extremity encased in an artistic Parisian shoe to peep cunningly from beneath a tempestuous rustle of silk, attracting the admiring gaze of impressionable man.

The retail boot salesman, if he be a knowing one, deals with an impatient lady customer by remarking: "You have such a high instep, ma'am,"—he has touched a weak spot, vanity! The fair customer becomes patience personified, and a purchaser. Fortunate indeed are they who possess perfect feet. But alas! how many poor mortals "shuffle" through life scarce remembering what comfortable walking means? Ah! that boot-salesman! Are there so many high insteps? His conscience has more elasticity than was ever inserted into the sides of some of his wares.

Perfect feet require perfect development of the muscles of the leg, as will be presently shown. This condition cannot be attained if freedom of movement is restrained by such atrocities as high-laced boots extending up the leg, so often worn by school girls of tender age, high-heeled boots and shoes, narrow ones, etc., worn by both sexes of more mature age, but possessing little sense. There are other numerous predisposing and exciting causes leading to the destruction of the perfect foot.

The human body has often been compared to a steam-engine. Food represents the fuel. Elimination of water by the skin—sweating—and that which is given off by the lungs, comparable to steam. Various parts and actions of the body have been shown to resemble mechanical contrivances in daily use. It is not surprising, therefore, that the Great Architect of the universe should have, in our creation, anticipated examples of human architectural construction. Are we not endowed with *arches* of the foot? Do we not speak of an arched instep? We were all of us originally possessed of two arches of the foot, more perfectly designed and constructed than any conceived by man's mind. These

arches still exist in their superb beauty and usefulness, unless they have been impaired, perhaps destroyed, by rough treatment, neglect, or disease.

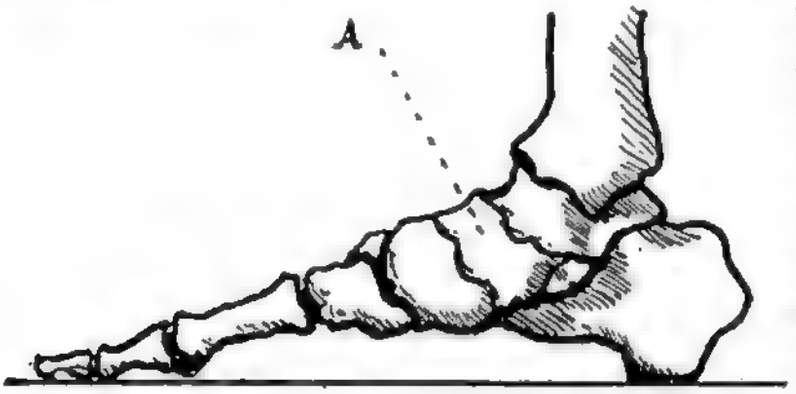


FIG. I.—THE LONGITUDINAL ARCH OF THE FOOT.
(A—The bone which forms the keystone of the arch.)

Taking a view from the side of a natural perfect human foot, it will be seen that it is arched from behind forwards—that is, from the heel to the balls of the toes. The heel forms the posterior pier of the arch, and is the single narrow supporting point behind. This arch broadens towards the balls of the toes and extends in a double or groined manner to the front and wider portion of the foot. This is known as the longitudinal arch. Without wearying the enquirer with the enumeration of the bones entering into its formation, or going into technical details, a glance at Fig. 1 may be sufficient to make the matter obvious. The *keystone* of the arch being that bone which is seen to support the bones of the leg. Again, if a section is made *across* the foot at the junction of the long bones of the sole with the small wedge-shaped bones of the instep, it will readily be seen there is an arch also stretching from side to side. To describe minutely how the curves of these arches are maintained would be tedious, suffice it to say that the bones are held together by ligaments. (Ligaments are strong fibrous bandages which bind bones and joints). Besides, ligaments, which are insufficient in themselves to retain the contour of the arches, the muscles of the leg—(the leg is that part of the lower limb between the knee-joint and the ankle; that portion between the hip and the knee is called the thigh)—which extend by means of their tendons or "leaders" over the ankle-joint and across the sole of the foot, are important factors in their support. These "leaders" are stretched like bowstrings across the concavities of the foot arches, or are disposed in a similar manner to the steel or wire "stays" of a suspension bridge. This arrangement gives elasticity and springiness to the foot. Without this springiness, where is your athlete? Last in the race. Where is your high or long jumper? He has either not left the mark or has, on alighting on his feet, suffered from shock, for springy arches lessen concussion in walking, running, and jumping.

The maintenance of the erect attitude that distinguishes us from lower animals which "go on all fours" is effected *chiefly by balance*, together with the arrangement of joints and their ligaments. Little assistance indeed is given by muscles for this purpose, except by those muscles—the muscles of the leg—which support the arches of the foot. Our supporting base, formed by planting our feet on the ground, rest on the piers of their arches. Equilibrium for standing or progression is only maintained by the ever watchful action of the muscles which extend over the ankle to the feet. How important it is then that the muscles of the calf, front and side of the leg, should be well developed, so that they

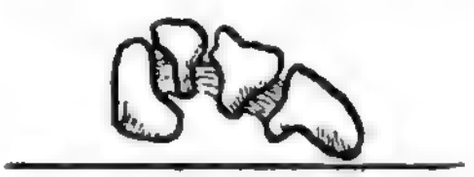


FIG. II.—THE TRANSVERSE ARCH OF THE FOOT.

may be able to perform the great variety of work demanded of them. It will readily be seen that if these muscles are allowed to degenerate through lack of proper exercise or

are overburdened, without being properly developed to support extra weight, the arches have a tendency to "give way." The extra weight may be the superadded corpulency of the body. This often accounts for the splay foot of the "corpulent copper" or (to be more respectful to a fine body of men) of the ponderous policeman. It is well known that a large percentage of the London police are recruited from agricultural districts, where they have led lives of healthy muscular exercise. The change of habit and environment, the slow pace of their walk along their "beat" often induces corpulency, the trunk becomes more weighty, through what is really a life of inactivity compared to their former vigorous agricultural existence. We will not attribute this adipose accumulation to the old libel associated with "the cook and the rabbit pie," nor to the more fattening properties of London ale compared with that of haysail and harvest beer. This corpulency, coupled with long standing, produces a condition which even he who runs may read, the weighty body supported, or rather unsupported, by withered limbs. The spring-like walk is lost, progression is painful, awkward, and shuffling; their former athletic activity is lost, and the cry of "Stop thief" is but a bitter taunt, serving only to accentuate their acute consciousness of utter helplessness in the chase.

Policemen are not the only sufferers from this condition of splay foot, or flat foot. Myriads of others who lack muscular tone and follow occupations demanding long standing and weight-lifting are victims to the unhappy loss of their foot arches, viz., waiters, housemaids (who carry heavily-weighted trays), shop assistants—male and female, potmen, growing lads, lassies, &c. Those coming from hilly or mountainous countries, who follow the occupation of waiting—such, for instance, as the Swiss—are not so prone to lose the natural symmetry of the foot. Hill climbing in early youth develops the muscles of the legs. Few English waiters have had the opportunity of climbing to a higher altitude than that afforded by Primrose Hill. During the Salvation Army Congress the other day how easy it was to distinguish, by the springiness of their walk, those delegates who hailed from mountainous countries, without taking into account the characteristic costume of the mountaineer.

When the arches of the foot give way the foot assumes the aspect indicated in Fig. 3. It looks broader and longer than natural; the great toe—which should not project so far as the first toe—is seen to be on a level with it, or is noticed to extend beyond it. The arch on the inner side of the foot is non-existent, and the bones which originally formed it are in contact with the ground.

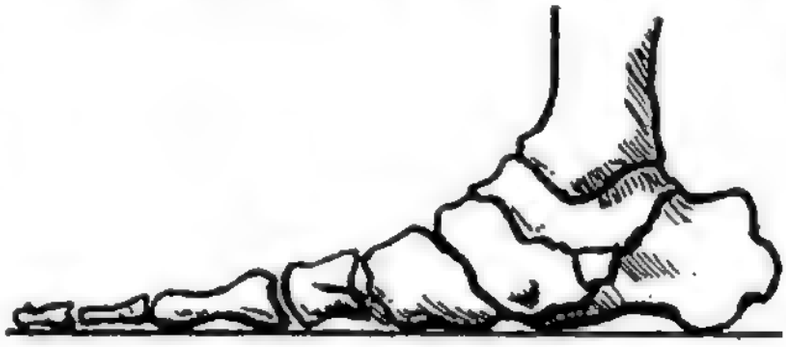
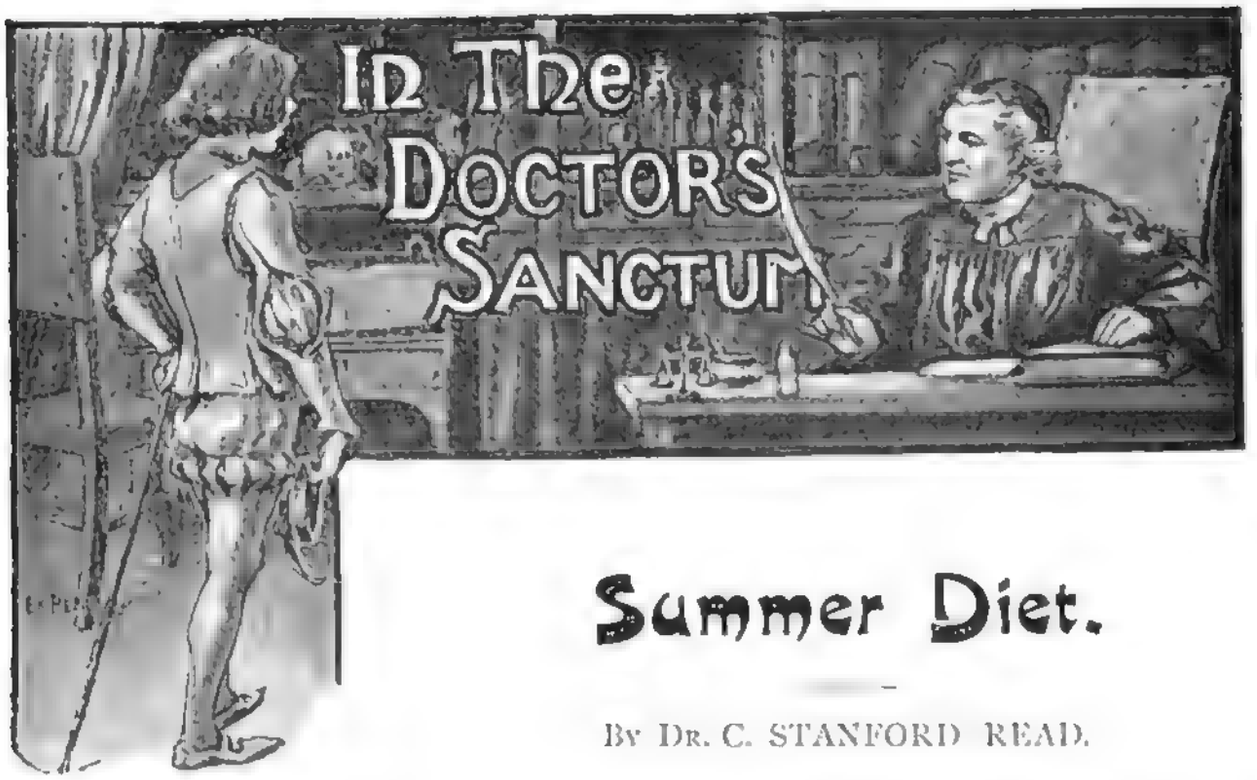


FIG. III.—THE POSITION OF THE BONES IN "FLATFOOT."

In many severer cases the manipulative interference of a surgeon is first of all necessary to arrive at a cure. Prevention is better than cure. Much is said just now of preventative medicine. Why not preventative surgery? Preserve the symmetry of your feet. See to the bridges that you travel on. Look out for any sinking of their arches. If you be a sprinter, and would add five yards to your pace, tighten the springs of your feet by developing the muscles of your legs. Young ladies, would you add grace to your carriage, lightness to your step in the ball room? Then see to your arched insteps.

E



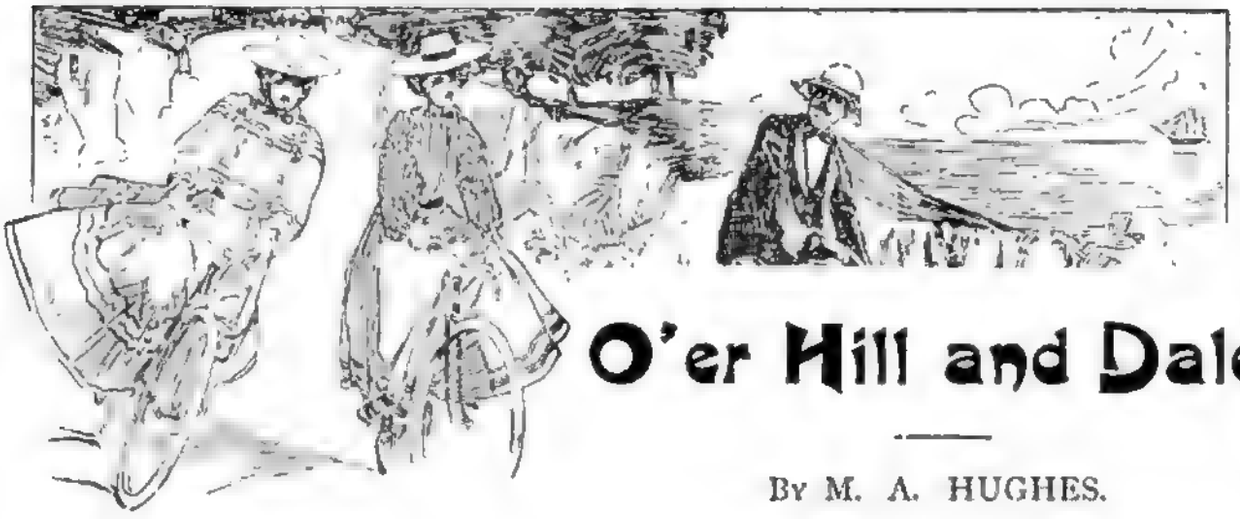
Summer Diet.

By Dr. C. STANFORD READ.

DURING this hot season of the year, some modification of our dietary is necessary and desirable in order to keep in good trim. The changes are only comparatively slight, but it would be well to know on what theoretical grounds we base such a statement. To properly understand why we should alter the nature of our food during the summer, we should know something of the chemistry and physiology of nutrition. The object of taking food is threefold. First, we take food to enable us to produce energy to perform work; secondly, to produce heat and keep up the temperature of the body to 98·4° F.; and, thirdly, to maintain the growth and repair of the body. Now, anything which ministers, on being taken into the body, be it in ever so small a degree, to one or more of these results, may be appropriately regarded as a food. Now, when we cast our eyes over the different varieties of food-stuffs which ordinarily make up our dietary, we see that some of them take some share in all of the above processes, and some tend mostly to do repairing work, and others to cause the production of heat. Fats, sugars, and starchy materials are essentially foods of the heat-forming class, while meat, fish, eggs, milk, and cheese, &c., belong to those which go mostly to form tissue and to repair the waste which has been expended through work. It is quite evident to all, therefore, that in the summer months we ought to so regulate our intake that there will be less tendency to produce so much heat within us, for naturally the higher the external temperature the less heat do we need to form within. Our normal and constant temperature is kept up by a wonderful combination of the two processes of heat production and heat loss, so that during the hot season we diminish the former by diet regulation and increase the latter by lighter clothing, thereby promoting the radiation of heat into the surrounding atmosphere. Less meat should, on the whole, be eaten, because, though meat has more tendency to repair waste and promote growth than form heat, yet, what heat meat does produce, it does so very quickly, and the intaking of much animal food tends to throw a good deal of work on the kidneys, which at this time of

the year have a greater liability to be overworked, so that we should be careful not to give them any undue strain. It is not only theoretically true, but it is the experience of most of us that under the influence of external heat less food on the whole is found necessary. The appetite in such circumstances is diminished, and less exercise is needed to keep the body warm, and there is accordingly less wear and tear of the materials of the body, and consequently a smaller supply of food is needed for its repair. Another point of importance to bear in mind is that all exercise brings about an increase of heat within us. Now if we eat more than is necessary, and in this way surcharge ourselves with heat-producing material, and at the same time we perform muscular exercise to form still more heat, it is very evident that in hot weather it is more difficult to get rid of this excess of warmth, and the body must in some way suffer in consequence. What is the resulting experience of the individual who acts thus? The result is that his general system suffers from the effect of saturation with carbonic acid from the exercise; from the heating of the blood and the effect of this upon his nerve-centres, the whole completing the picture of general fatigue, which is no strange sensation at this time of the year. If the above combination of ill-effects be carried still further, and the external temperature be very high, so that heat-loss becomes difficult, the nervous system may be affected to such an extent as to bring on an attack of sunstroke. In an active army it is always found that sunstroke almost invariably occurs amongst the infantry, for those who are riding are, by their lack of muscular exercise, producing less heat, and therefore less liable to such a condition.

We therefore see that in a general way during the summer time we should eat less meat, fat, and sugary and starchy substances; eat less in quantity, and partake more of fresh vegetables and fruit. Fruit and vegetables do not contain a large amount of nutriment, but they tend to increase bulk and contain salts which are refreshing, and help to supply some of the requirements of the body. If we only compare the typical dietary of the inhabitants of the Tropical regions with that of the dweller in the Arctic zone, we see that the former eats much less animal food and partakes largely of the vegetable kingdom, while the inhabitant of the cold parts has to consume large quantities of flesh and fat to produce sufficient heat to keep up his temperature to the normal standard. The question of solid food having been considered, it remains for us to look into the question of beverages. A greatly increased consumption of liquid is necessary to make up for the loss the body sustains by perspiration. Not only does the organism thus get its requisite amount of fluid, but a large quantity of water drunk flushes out the kidneys, preventing any accumulation of waste material there, and, to put the matter loosely, the drains of the body are thus well purified. Acidulated drinks are the most refreshing, while alcoholic beverages are for the most part not desirable, because of their stimulating action on the circulation, causing an increased flow of blood to the skin and producing the subjective feeling of warmth. Iced drinks in moderation are most acceptable and refreshing; iced coffee being, I think, one of the nicest. With the slight modifications I have pointed out much may be done to prevent those feelings of languor and inaptitude for exertion which are so common during the hot weather.



O'er Hill and Dale.

By M. A. HUGHES.

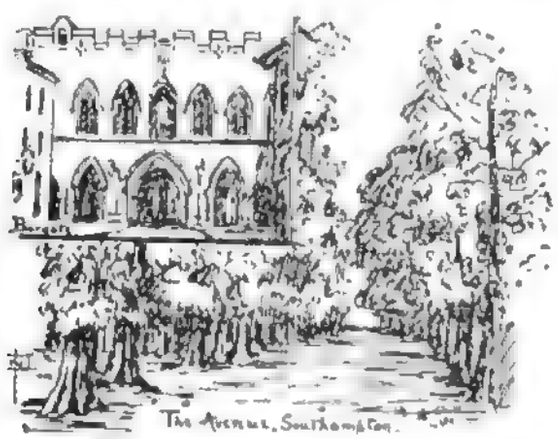
(SOME PLEASANT CYCLING JAUNTS.)

RIDE No. 3.

The New Forest (80 miles).

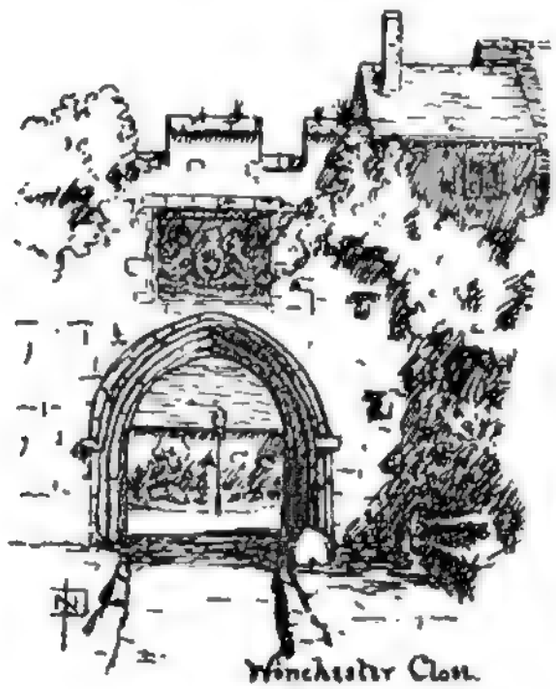
SHOULD any of my readers be in the neighbourhood of Southampton they will find that the New Forest will provide them with a most interesting jaunt.

A capital, though somewhat extended, trip of about 80 miles may be secured if, leaving Southampton by Above Bar Gate Street, we proceed through the splendid avenue which



leads to the Common. Crossing the latter, which is about a mile long by half a mile broad, we proceed to Bassett. Another two miles and a half and we are at Chandler's Ford. We have now a run of about five miles before us to Otterburn, where evidences of Cæsar's army having visited have been found, including a medal of the Roman leader in splendid preservation. A short distance further on is Compton, and then, after passing through St. Cross, we reach the ancient city of Winchester, having thus covered about a dozen miles. The city is brimful of interesting sights and recollections, too numerous to mention here; so having, in the brief time at our disposal, viewed the chief attractions, we will continue our journey. Leaving by the West Hill, we pass Winchester College, which stands on the site of a grammar school, dating from 1136, and so proceed to Hursley. Bearing to the right at the direction post, a winding road through Anfield brings us to Romsey, thought by antiquarians to occupy the site of a Roman town. The Abbey, founded by Edward the Elder, is the chief attraction, whilst in the market square is a bronze statue of the late Lord Palmerston, whose estate, known as Broadlands Park (now in the possession of the Ashley family), we leave on our left as we proceed towards Ower, which is four miles distant. Up to this point the roads have been somewhat hilly, but we now enter the Forest proper, and the remainder of our journey is over good and fairly level roads. We enter the Forest at Cadnam, which is two and a half miles from Ower, and following the road towards Castle Malwood, pass on our right, by the lodge, the stone which marks the

spot where the tree stood which turned the shaft of the arrow which proved fatal to King William II. (Rufus) in 1100. At the top of Stoney Cross Hill a fine view of Southampton



Water is obtainable. Descending into the glen, we continue our way to Ringwood, a pretty rural village situated on the banks of the Avon. Here we turn off the Dorchester-road to the left, past the station, and following the winding course of the river through Lower Kingstone, we soon reach Sopley, passing on our way Tyrell's Ford, where the Knight, in his flight after the tragedy in the Forest, crossed on his way to Poole. Two and a half miles farther on we reach Christchurch, one of the prettiest places imaginable. Standing on a strip of land between the rivers Avon and Stour, the splendid old Priory Church tower stands out conspicuously. Fragments of the Priory walls are still standing, as well as portions of the Castle keep, which are quite ten feet thick. We now turn towards Southampton, but have a good twenty-five miles to cover yet. Passing through Hinton and Hornsley, we have a long run to Lyndhurst, where, in the hall of the Queen's House, is an ancient stirrup iron, said to be the one used by William Rufus on the day of his fatal hunting expedition. The most noteworthy feature, however, is the splendid fresco in the church, representing the ten virgins, the gift of the late Sir Frederick Leighton, P.R.A. The remainder of our journey lies through Totton, Redbridge, and Millbrook, whence we are soon back at our starting point. If so desired, this run may be easily divided into two by taking the road which leads from Totton through Great and Little Testwood to Ower.

RIDE No. 4.

The Isle of Wight (Eastern Half) (45 miles).

In the holiday season, no doubt many of my readers will be seeking "fresh fields and pastures new" around the favourite health resorts. The "jigger" is nowadays almost an indispensable part of this equipage, for it offers facilities for seeing many of the interesting portions of the districts, which otherwise would be a closed book. To those who do not fear a few stiff climbs, the "Garden of England," otherwise the Isle of Wight, offers some of the grandest scenery to be found anywhere in the British Islands, in comparison with the amount of ground which has

to be covered. Almost at every step—or, to be more correct, turn of the wheel—some fresh and grand view breaks in upon us, and although the distance is short, there is so much

to be seen that we feel it would be an injustice to attempt a complete circuit of the Island in one ride. Consequently we have (figuratively speaking) split the Island into two, making

Cowes, East and West, our starting points, thus confining ourselves to trips not exceeding fifty miles, over roads which throughout the Island, except for the hills before mentioned, are really good. Should we have made West Cowes our headquarters (perhaps it would be as well to do so), and having decided to explore the eastern half of the Island first, we cross by ferry to East Cowes. Passing the gates of Osborne Park, we proceed to Whippingham to view the church (designed by the late Prince Consort), which Queen Victoria attended when she resided on the Island. This may be reached either by the main road or by the new avenue. From Whippingham we avoid all roads to the left, and so, after a run of about four miles, reach Newport, the oldest town in the Island now existing. Keeping to the left of the town, we proceed by way of Blackwater and Rookley to Godshill, turning to the left at Rookley for the latter place. The chief point of interest at Godshill is the church, which has a striking position on a hill, whilst from the churchyard a most beautiful view is unfolded. We now turn to the right, until at the bottom of Bleake Down we reach Lashmere Pond, a favourite resort of botanists, and here we bear off sharply to the left, and have about four miles to cover to Niton. In a hollow of the undercliff is Crab, or Upper Niton. The church, one of the oldest in the Island, but now partly restored, is worth visiting. Turning to the left, we take the cliff road to Ventnor, passing on our way the village of St. Lawrence, which is chiefly celebrated for its very small church, once considered the smallest in England. It was originally only 20 ft. by 11 ft., and 6 ft. high to the eaves. Very fine is the scenery as we run into Ventnor, which, fifty years ago but a small fishing hamlet, by virtue of its extreme beauty is now one of the most fashionable resorts on the Island. Continuing our way, we pass under the downs to Bonchurch, embowered amongst trees, with its quaint old church, and then have a stiff hill upand down to Shanklin—famous for its Chine. The village has numbered among its visitors such celebrities as Lord Jeffery, Archbishop Whateley, the poet Keats, who wrote "Lamia" here, and Longfellow, who was the author of the lines on the shield of the fountain at the corner of the High Street. Another two and a half miles brings us to Sandown, where, if one chooses to detour, a grand view which baffles description can be obtained from the

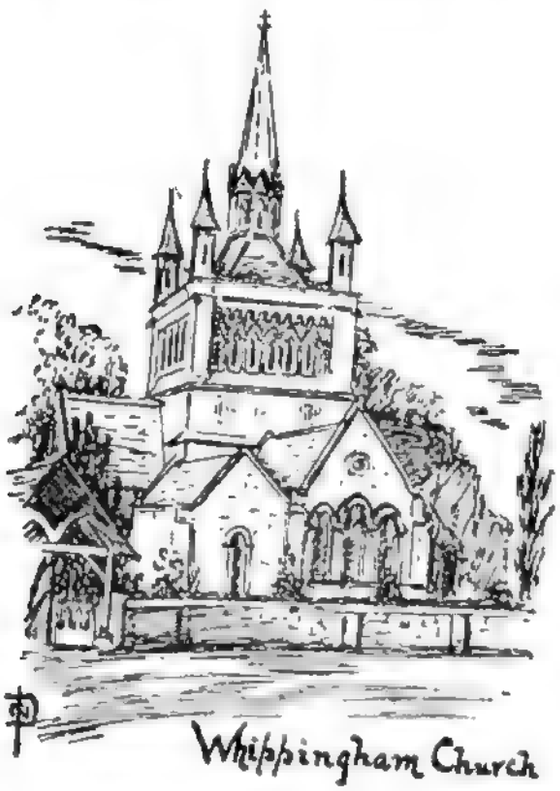
top of Bembridge Point. Our way, however, lies towards Brading, which still possesses its ancient stocks and bull ring. The church and churchyard, too, are well worth a visit.

We here have a four miles stretch of road to Ryde, passing through some pretty country, with fine views on the right hand. Ryde, like Ventnor, is chiefly modern, and possesses one of the longest piers to be seen, except those at Rhyl, Southport, Blackpool, and Southend. Taking any of the ways to the left, we make for Binstead, with its quarries of limestones, used for the building of Chichester and Winchester Cathedrals. About a mile further on, and half a mile to the left, we come to Quarr Abbey, the remains of a Cistercian monastery, dating from 1132. Passing through Wooton Bridge, we soon reach our outward route, and make our way back to Cowes, having journeyed a distance of about forty-five miles over good, but hilly, roads.

RIDE No. 5.

Isle of Wight (Western Half) (45 miles).

More delightful scenery greets the tourist of the "Garden Isle" who covers the western

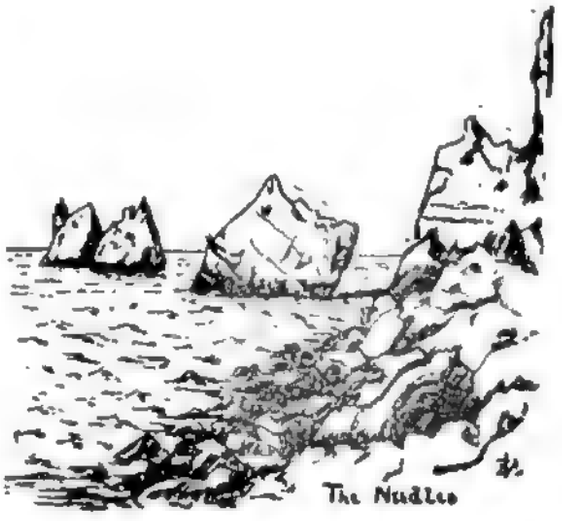


half. Leaving West Cowes, we proceed by way of Northwood, past Parkhurst Prison and the Albany Barracks, to Newport, which is four miles distant from our starting point. Bearing to the right out of the town, and avoiding the road which leads to the village of Carisbrooke, we are soon in sight of the famous Carisbrooke Castle, which, situate as

it is on high ground, presents a most striking picture. Built at different periods, the keep, which dates from the eleventh century, is the oldest portion. Here is a great well, 145 feet deep, with a wheel, inside of which a donkey works, drawing up the water. Charles the First was confined in the castle for some time, and a window is shown as the one through which it is said he tried to make his escape. A charge of fourpence is made for each visitor to the castle. Returning to the village to view the curious epitaphs in the churchyard, and also the remains of the Roman villa near the vicarage (although the latter are not so interesting as those between Sandown and Brading), we turn to the left by the church, and have a good run down for some distance towards Shorwell, over a capital surface, with scenery on both sides which baffles description. After leaving Rowborough we commence the ascent of the

downs, but before reaching Shorwell have a nasty hill to negotiate. The church, which we pass on our left, dates from the time of Edward the Third, but has been considerably

restored. The most interesting features are the stone pulpit of the 15th century, and the iron hour-glass. There are also some remains of frescoes and quaint epitaphs. Turning to the left by the church, we have a fairly even road to Kingston, which is distant a little over two miles, whence we proceed through Chale Green to Chale. Here we will dismount to view Blackgang Chine and "Hoy's Pillar." The latter is on Chale Down, and was erected by Michael Hoy, a Russian, in memory of the visit of Alexander I. of Russia to England in 1814. On one of its sides has been affixed a tablet to the memory of soldiers who fell in the Crimean war. For our purpose it would be as well now to return to Shorwell, and then, branching off to the left, we have a two miles run under Brightstone Downs to Brightstone, or Brixton. The church is the chief point of interest. It dates from the Norman period, and has registers back to 1566. Bishops Kerr and Wilberforce were at one time rectors of the parish. Our next point is Mottistone, a mile and a half ahead. As we pass the church on our left, we might dismount to see the pair of weatherbeaten old stocks in the churchyard. Continuing on our way past Brook House, we have a formidable rise before us, known as Brook Chute. At the top we bear to the left through Shalcombe, over 400 feet above sea level. Another three miles and we reach Freshwater, and, leaving our machines in the village, proceed to visit Freshwater Bay, with its curious Arched and Stag Rocks, and thence on to Alum Bay to view the Needles. Descending into the village once more and remounting, we take the road on the left bank of the River Yar to Norton. Crossing the estuary by the bridge, we enter the old-fashioned town of Yarmouth, which in 1377 was destroyed by the French. A four-mile spin brings us to Shalfleet, which possesses a curious old church with Norman tower. A local rhyme records :—"The poor and simple Shalfleet people sold their bells to build their steeple," which rhyme originated from the fact that the spire, a wooden one, was obtained by the sale of the bells. From



Shalfleet we turn to the left and follow a winding road through Porchfield, and so on to West Cowes, having covered in all about forty-five miles.

(To be continued.)

Our Ladies' Pages.

THERE art still mothers who worry over their daughters' complexions as soon as they reach their teens, says a contributor to one of the magazines, and look upon all sorts of outdoor games and sports with suspicion ; but they are few and far between. The freedom of the younger princesses, the sensible way in which the Duchess of Fife encourages her two little girls to ride, and fish, and enjoy themselves in a natural healthy way has influenced every class, and it is a poor sort of school in which some attempt at physical culture is not made. Among the children who are being or have been drilled at one of the best and smartest schools of physical culture are the Princess Henry of Battenberg's youngsters, the Countess Bentinck's children, the Duchess of Portland's children, and the twelve-year-old son of Lady de Trafford, and Viscount Wendover. Among the elders who have had their physical education well looked after may be mentioned the two sons of Viscount Valentia, Viscountess Helmsley, and Lady Juliet Duff. Lady Warwick is a great believer in open-air exercise, and her daughter always took a great deal of pride in being "extremely fit."

It is little more than a decade ago that Sir Frederick Treves, in a pamphlet on Physical Education, wrote :—

"If the work of a school could be interrupted for thirty minutes in the middle of the morning in order that the children might go through some few dumb-bell or bar-bell exercises in fresher air, and then finish up with the running maze to music, something would be done towards securing a reasonable development of the body."

Great progress has been made in the right direction since then, and besides the attention paid to the development of the body in the ordinary school, there are academies all over London for the children who are being educated at home, and for their use during the holidays. Here the small boy who is just going to a public school learns the rudiments of the noble art of self-defence, and both sexes of all ages vary the development of their muscles by learning how to walk well, how to breathe properly, and how to dance.

As Sir Frederick Treves declared in his pamphlet on the subject :—

"The physical training of children should be commenced early, should be made as interesting as possible, and be represented in the main by what may be termed scientific romping."

For this reason training in classes is excellent, but it should be supplemented by a certain amount of training at home, for every instructor has his own pet method, while students of physical culture as a whole are forced to conclude that no system is *per se* complete in itself.

From the age of four every child should be made to inhale through the nose and exhale through the mouth by contraction of the diaphragm four or five times every morning before breakfast, and to do one or two bending exercises. Five minutes each morning is sufficient, and after a short time the exercises become as much a part of the programme as the morning bath ; and a valuable habit has been formed which will be invaluable as a preventive of weak lungs and defective powers of digestion.

Elder children should get through from three to five minutes' dumb-bell exercise before each meal, and should never be allowed to run about or hurry off to school until quite twenty minutes after eating.—*Oban Times.*

* * *

For health and pliancy, I believe the leg-balancing movements are the most useful. Stand with heels together, taking a long breath, bend trunk of body forward, the arms spread out level with the shoulders. Raise slowly each leg alternately, and exaggerate the position of the flying Mercury. Then there is the football kick, done steadily and slowly, not forgetting to use the knee freely. Another excellent exercise for strengthening the abdominal region is to cross the arms behind the hollow of the back, and bend slowly backwards as far as you possibly can without feeling any over-strain. These balancing exercises are the foundation upon which all others are formed. By muscle culture is certainly involved success in the highest forms of art, more especially the dramatic. Degenerate bodies are only capable of expressing degenerate ideas on or off the stage. The master of stage technique finds himself at a discount when not lord over every muscle of his body. Muscle training is for the whole body what exercises and scales are for the vocalist and musician—means to an end, that end executive power. It gives to the actor or actress command of gesture and over their limbs perfect control to express by gait deftly the character they personify, from the walk of Medea to the shamble of the costermonger.

Through physical culture we may hope for the renaissance of drama or a new departure in classical drama, where action will more and more take the place of speech with advantage. We rarely see the emotions of the soul expressed in any degree of perfection by dumb show. In great drama, especially where grandeur of gesture is appropriate, the body must be obedient to the emotions of the soul, and to obtain a faultless pose under a certain given emotion means the power of faultlessly expressing by the lines of the body some great moment of the soul's agony or joy, it may be in one magnificent movement and by the gradations in that movement. Many of the Greek poses we may suspect if examined are founded on hygienic exercise carried out to perfection with the accompanying inspiration of the soul.—Lady Colin Campbell.

* * *

A woman physician, in addressing her audience the other day, gave some helpful suggestion as to the way of looking at our bodily conditions. She said : "Health is contagious, much more potently so, too, than is disease. I've about come to the conclusion that we physicians study disease too much and health too little to be of much use to humanity. Why, during our student years, we have an average of only one hour a week devoted to hygiene, and two, perhaps, to

physiology. All the rest of the time we're studying—disease. Now I believe that's just the opposite of what we ought to do. If we'd study health, talk health, act health, I believe disease would take care of itself. And it's much the same thing with temperance. If we, as white ribboners, would make ourselves as lovely and lovable, as sweet tempered and usefully womanly as we possibly could (and we can be none of these thing unless we have sound bodies), I believe notning would so help the cause we all love. You know it isn't much use to talk temperance after your third cup of tea or coffee, or your one too many helpings of pie or even roast beef. It is not only intemperate, it is unchristian, to have dyspepsia. It is a disgrace to have any ailment that commonsense will obviate. And it shows a lack of intellectuality to make each other's ailments and diseases the chief topic of conversation. I hope to live to see the day when it will be considered as ill bred to ask after last week's influenza or last month's rheumatism as it now is to remark on the patch on one's shoe or the mole on one's face. I tell you, when we learn to think health and poise and wholesomeness, temperance and economics, physical happiness won't be long in taking up their abode with us."

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At this season of the year, a few hints with regard to bathing may be of interest to our lady readers:

Exercise before bathing, so that one feels comfortably warm.

Allow at least three hours to elapse after a full meal before taking a full bath.

Every form of warm bath, whether general or local, should be followed by cold water application of equal extent, but only for a moment of time, in the case of general baths.

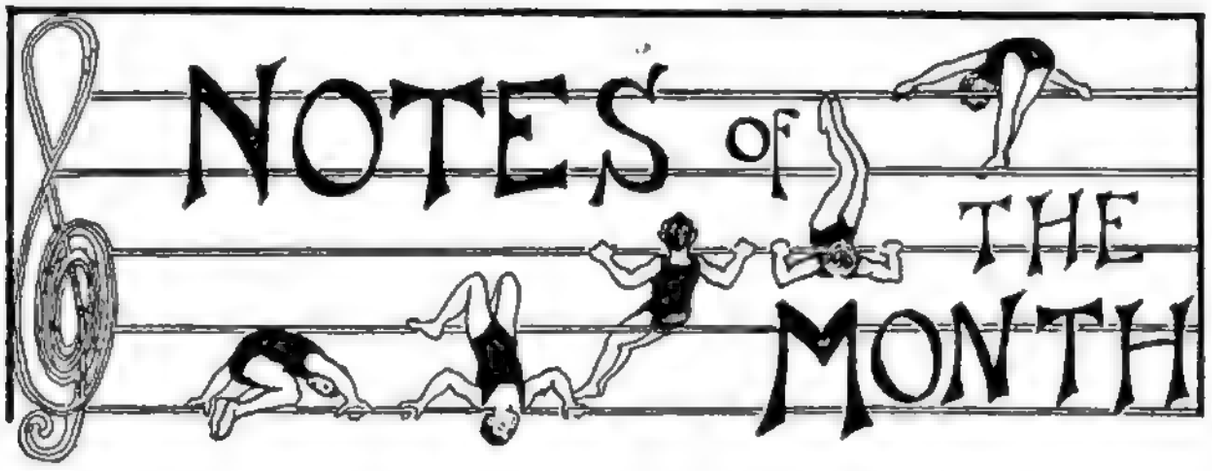
The weekly warm bath of those who take a cold bath daily should last not more than ten minutes.

Chilliness after a bath indicates that it has done harm rather than good. Find out the cause, and do not repeat it.

Train yourself gradually to the use of the cold bath, beginning with tepid water, and decreasing the temperature by degrees from day to day.

After partly drying with the towel, vigorously rubbing with the hands until quite dry will usually prevent chilliness.

* * *



The Relative Value of Exercise.

Dr. Germain See gives the following opinions and rules as regards exercise :—

"Football is a dangerous exercise without value. Lawn tennis is an innocent game. Foot races are of moderate value. Races with burdens merit thorough disapproval. Bicycling is a very remarkable exercise, but racing should not be encouraged, since serious consequences to the heart and to those forces actively called into play are to be feared. Instead of popularising these contests, therefore, we should restrain and prevent them.

"Active and passive gymnastics ought to be encouraged in so far as they facilitate respiration and help the muscular system.

"Fencing deserves the heartiest approval, as it develops the strength."

He apportions exercise appropriate for the various ages, sexes, individual constitutions, etc., as follows :—

"(a) For children up to twelve years of age, I prescribe very easy sports without effort, as lawn tennis. I permit quick walking, but not racing. I prohibit bicycling. If one goes beyond these prescriptions, the heart is dilated and weakened.

"(b) For adolescents from twelve to sixteen or eighteen years, bicycling and rowing are excellent. Fencing should be moderate and horseback riding insignificant in amount.

"(c) For adults eighteen to thirty-five or forty years of age, with a tendency to obesity, or with large, inflated, gaseous stomachs, bicycling is desireable, since it decreases the bodily weight without diminishing the strength. For a large stomach it is useful, though not always efficacious.

"(d) For fleshy adults with thickening of the heart: The moment the heart is attacked and becomes fatty, bicycling is bad. Walking up an incline is preferable; and if at the same time one decreases the amount of food and drink taken, and abstains from alcohol in all its forms, this form of exercise may prove very efficacious.

"(e) For affections of the heart: No one should be permitted a bicycle unless a careful examination of the heart has been made. I have seen, as I have shown at length in my book, 'Sur le Traitement Physiologue du Cœur,' the most grave accidents result in the case of those who have the lesion of the heart. For them bicycling should be absolutely prohibited.

"(f) For persons with diseased lungs: Asthmatic patients may bicycle to advantage if the heart is sound, but consumptives cannot. In any case the patient should not be allowed to bend over."

* * *

Physical Education.

Mr. George Smith, the Headmaster of Merchiston Castle School, in a paper on "Developmental Exercise at School," said there were two main aspects of school exercise: companionship and solidarity.

These tended, on the physical side, to produce a healthy state of nerves and to correct any tendency towards self-consciousness, and on the ethical side to the recognition of corporate feeling, and to the recognition of the unity of the individual. If these two aspects were kept in view in the organisation of physical exercise, and if at the same time judicious, and as far as possible unobtrusive, modifications were made for boys who needed such modifications, satisfactory results were likely to be secured. Physical training should form an integral part of the school curriculum. The actual physical benefit which resulted from the daily exercise, though important in itself, was only one half of the result achieved. The other half consisted in the increased feeling that the care of the body was a moral duty. He would not for a moment deny the danger of the abuse of athleticism, but he did think that the remedy for it lay along the lines which would tend to make the culture of the body take its proper place as a duty, and not as self-indulgence. Mr. Smith also referred to military drill—drill of the parade ground rather than that of the field day—as productive of excellent results.

* * *

Y.M.C.A. Gymnastic Club,
Cape Town.

Dear Mr. Sandow,—I am enclosing by this mail a photo of the Y.M.C.A. Sandow Class, which was inaugurated six months ago. I need hardly state that the class has been a great success, so much so that we have decided to open a class for boys. We gave four very successful displays of physical culture and gymnastics last year, and hope to make a vast improvement this year. I would like to take this opportunity to welcome any "Sandowites" who contemplate making South Africa a visit, even if they are only passing through Cape Town. We shall be very pleased to see them and show them the beauties of the Cape.

Wishing you and your magazine every success,—Yours, etc.,

HARRY LOGAN.

Y.M.C.A. SANDOW CLASS. (*Cape Town.*)

THE DOCTORS' DEPUTATION TO THE BOARD OF EDUCATION.

On Monday, July 11th, a most influential body of members of the medical profession attended at the Board of Education Offices for the purpose of urging upon Lord Londonderry the necessity for more attention to the question of hygiene, and the instilling into young minds the deleterious effects of alcohol, in the curriculum of all elementary schools. Amongst those who attended were Dr. Edward Thompson, M.P., Dr. Hutchinson, M.P., Sir Walter Foster, M.P., Sir Wm. Broadbent, Sir Thomas Barlow, Sir Lauder Brunton, Sir Hugh Beevor, Sir Victor Horsley, Dr. T. Dryslwyn Griffiths, Professor Sims Woodhead, Dr. Buzzard, Mr. A. W. Mayo Robson, Mr. Andrew Clark, Dr. Hutchinson, Dr. Kilynack, Dr. G. E. Shuttleworth, Dr. Annie McCall, Dr. Creasy, Dr. Dawson Williams, Dr. Mary Scharlieb, Dr. Mitchell Bruce, Dr. Sutherland, Dr. Newman, Lady Biddulph of Ledbury, and many others. Several letters of regret were received, amongst them being one from the Marquis of Northampton.

The deputation was the outcome of a petition to the Central Educational Authorities of England, Wales, Scotland and Ireland, distributed to the medical profession of the United Kingdom and signed by no fewer than 14,718 registered medical practitioners. The wording of the petition was as follows:—

We, the undersigned Members of the Medical Profession, having constantly before us the serious physical and moral conditions of degeneracy and disease resulting from the neglect and infraction of the elementary laws of Hygiene, venture to urge the Central Educational Authorities of the United Kingdom (the Board of Education of England and Wales, the Scotch Education Department, the Commissioners of National Education in Ireland and the Intermediate Education Board of Ireland), to consider whether it would not be possible to include in the curricula of the Public Elementary Schools, and to encourage in the Secondary Schools, such teaching as may, without developing any tendency to dwell on what is unwholesome, lead all the children to appreciate at their true value healthful bodily conditions as regards Cleanliness, Pure Air, Food, Drink, &c.

In making this request we are well aware that at the present time pupils may receive teaching on the laws of Health, by means of subjects almost invariably placed upon the Optional Code. By this method effective instruction is given to a small proportion of the pupils only. This does not appear to us to be adequate. We believe that it should be *compulsory* and be given at a much earlier age than at present.

It may, perhaps, be useful to call attention to what is being achieved in this direction by English speaking nations. In reviewing the steps taken it will be noted that one of the most prominent subjects with which the various countries have found it necessary to deal, is the question of the nature and effects of Alcohol.

In the Army Schools of this country and of all our foreign stations west of Aden, teaching in Elementary Hygiene is compulsory; such teaching including Temperance, Health and Sanitation, special attention being drawn to the deleterious effects of Alcohol.

In Canada, with the exception of two Provinces, Hygiene and scientific instruction on the effects of Alcohol are compulsory subjects in all Public Elementary Schools throughout the Dominion. In the two excepted Provinces (Quebec and Prince Edward's Island) teaching on Temperance is given. In the Protestant Primary Schools of the Province of Quebec

lessons upon Temperance and Health are compulsory, while in the Catholic Schools instruction in Hygiene is compulsory, beginning with the fifth year of school work. In the books on Hygiene authorised in the Catholic Schools the ill-effect of the excessive use of Alcohol is mentioned, but no special prominence is given to Temperance instruction.

In Victoria (Australia) teaching on Health and on the nature and effects of Alcohol, is placed on the list of compulsory subjects taught in all the Public Elementary Schools.

In South Australia teaching of Temperance is regularly carried out.

In Natal instruction is given in the Primary Schools on the laws of Health and Temperance, these being included in the list of Optional Subjects.

The whole question is dealt with still more completely in the United States of America. There the teaching of Physiological Hygiene, with special reference to the effects of Alcohol and other narcotics, is compulsory in all Schools under State or Federal control. About twenty-two million children are being educated under this system.

Thus we have shown that in many English speaking countries, definite attempts are being made to train the rising generation to appreciate from childhood the nature of those influences which injure physical and mental health.

Having regard to the fact that much of the degeneracy, disease and accident with which medical men are called upon to deal, is directly or indirectly due to the use of Alcohol, and that a widespread ignorance prevails concerning not only the nature and properties of this substance but also its effects on the body and the mind, we would urge the Board of Education of England and Wales, the Scotch Education Department and the Irish Education Authorities to include in the simple hygienic teaching which we desire, elementary instruction at an early age on the nature and effects of Alcohol.

We gladly recognise (1) the value of the teaching on this subject given in some schools in Ireland and in a proportion of the schools of Great Britain, by means of reading primers, moral-instruction talks, &c., and (2) the excellence of the occasional Temperance lessons provided in certain Schools by voluntary organisations; but until the four Central Educational Authorities of the United Kingdom include this subject as part of the system of National Education, it appears to us that the mass of the pupils must fail as at present to receive that systematic teaching of Hygiene and of the nature and effects of Alcohol, which alone we consider adequate to meet the national need.

Finally, we would venture to urge the necessity of ensuring that the training of all teachers shall include adequate instruction in these subjects.

Dr. R. Farquharson, M.P., Chairman of the Public Health Committee of Members of the House of Commons, introduced the deputation to Lord Londonderry, and pointed out that the deputation was of an unique character, it being, so to speak, the concentrated essence of the opinions of nearly fifteen thousand medical men spread throughout the Kingdom.

Sir William Broadbent, the Acting Chairman of the Committee of Distribution, then detailed the active efforts of the medical profession to further the development of early training in the principles of hygiene and temperance to check disease and degeneration. Sir William drew attention to the spontaneous effort on the part of the medical profession and the great importance of such a manifesto. Ignorance, he said, is the parent of ill-health, even more than vice, and alcohol has a lot to do with degeneration from the fact that so much of the working man's wage is spent in alcohol that the food supply must necessarily suffer. He thought that although it did not appear in the school curriculum in

the light of a medical examination, hygiene should be a compulsory subject in all schools.

Dr. Dryslwyn Griffiths, the President of the British Medical Association, as representing the profession, referred to the action of the Association, and drew attention to its resolution of January 20th, 1904, supporting the present movement as a practical measure against national physical deterioration and its general interest in the education of the people in hygiene and temperance. Ample proof, he said, was forthcoming for the necessity of some such step being taken in the increase of insanity and nervous diseases, and the decreased birth rate and increased infant mortality in large centres. The medical profession was determined to use its best efforts to stem the tide which threatens to undermine the British Empire. Much could and should be done to remedy these tendencies in modern civilisation by teaching young children the value of good health and how to preserve it, and he urged in the name of the British Medical Association that the training of teachers should include hygiene.

Sir Thomas Barlow, as specially interested in the hygiene and education of children, urged the adoption by the central authorities of the proposed development of elementary education in hygiene and temperance. The speaker referred to the good effects of the efforts of Lord Londonderry in this direction. Hygiene is at present an optional subject in schools, but he felt sure that if it went forth from that department that it was necessary, the effects of such teaching on the health and social prosperity of the nation would soon become apparent. We were being outdistanced by every other nation in this question, but, said Sir Thomas, in the words of Lord Derby, "England may be very late, but never too late."

Sir Walter Foster, M.P., was to have supported the previous speakers, but was compelled to leave, and in his place, Dr. Hutchinson, M.P., and Professor Sims Woodhead addressed Lord Londonderry. Professor Woodhead, who has studied the question closely, in the course of his medical research, expressed the opinion that the national prosperity rests upon it.

Sir Lauder Brunton, who is specially interested in national hygiene, in a most instructive speech, detailed the work done at the Nürnberg Congress, and referred to the international character of the movement. He said that even in the little villages of France, with not more than two or three hundred inhabitants, hygiene was included in the teaching of the children. Sir Lauder concluded with the remark, that if the subject became a compulsory one in our schools, in thirty years we should be as free from phthisis as we are now from leprosy.

Dr. Mary Scharlieb spoke of the need of general elementary teaching of hygiene, particularly of the diet and feeding of infants and children, and the influence of such teaching on the nation generally. She considered the great lack of knowledge of the various questions of hygiene deplorable.

Sir Victor Horsley endorsed the remarks of the previous speakers, and spoke of the need felt by the medical profession for the institution by the Government of elementary education in principles of health and temperance, the necessity of such teaching being made universal, and the importance of training teachers in the subjects named.

Lord Londonderry, in reply, having welcomed the deputation, said, that he felt that, in the interests of the rising generation, it was a great advantage for the Minister for Education to receive the views of such eminent authorities. He recognized the deputation as a very important one, for those present represented the world at large on this great question. He felt the great responsibility placed upon him, and regretted that owing to the fact that the committee appointed by the Duke of Devonshire to consider this important question had not yet presented the results of their deliberations, his hands were to an extent tied, inasmuch as he was not able to give any

definite answers to definite questions asked by the deputation. He was, however, thoroughly in sympathy with their requests, and his Lordship then proceeded to point out that the Board of Education had realised the necessity for some such step, and were already moving in the matter. In 1906 every teacher sent out will have had to pass in one or more of the subjects in the section dealing with the question of hygiene. Special advice is to be contained in the books issued by the Board, and at the annual meeting of school inspectors he always felt it his duty to impress upon them the necessity of paying particular attention to the physical welfare of the children throughout the country. They had, he thought, to use a vulgarism, "taken the bull by the horns," and were endeavouring to carry out many of the suggestions made. He and his colleagues were most anxious to prove to the rising generation the serious defects which accrue from the effects of alcohol and to bring about reform by moral power and persuasion.

Photo., W. H. Robinson, Bendigo.]

EASTER FAIR PROCESSION, BENDIGO, AUSTRALIA.
Sandow Physical Culture Class, M.U.I.O.O.F.

Dr. Farquharson having thanked his Lordship for receiving them, the deputation withdrew.

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The name of Messrs. Gale & Polden, of 2, Amen Corner, Paternoster Row, E.C., was inadvertently omitted from the excellent photographs which accompanied the article on the "Royal Military Tournament" last month. Messrs. Gale & Polden are publishing the photographs in their post-card series, and they are well worth securing.

* *

Amongst the working classes well-ordered devotion to children is a great virtue. When the workman, handicapped by his imperfect development, comes home overtired, it is a great temptation to escape from the worry of noisy children to the comfort of the inn or the club; but in a nation of athletes the workman would have learnt that drinking would soon take the athleticism out of them, and they would demand airy dwellings where family life would be possible with comfort. An airy workroom, and air-space round his home for healthy exercise where he could train his children in the games and

exercises necessary for their development into athletes, would be the minimum of his demands.

Garden cities would naturally absorb much country around towns, but such places need not be the depressing areas many suburban districts have become under the individualistic invasion of the jerry builder.

There would be a levelling up and a levelling down in society. The rich would lose some of what they now consider their pleasures, but hunting and sports demand a good physique, and if the rich will not bring up large families of fully developed men and women for the work of the Empire, they must pay for pleasure in other ways. As our Empire has expanded people have grown richer, and have become accustomed to pleasures their ancestors never dreamed of, and now the time has come for something to be sacrificed to maintain that Empire, unless it is to decay as other empires have decayed in the past. Our colonies are turning out men of fine physique, and we can turn out men just as good if we determined to organise our forces and make it the duty and pride of every town in the land to strive with its neighbour for that physical glory which, kept within bounds, conduces to that morality without which no empire can endure.—Dr. H. Beale Collins.

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Elementary School Girls' Physique.

An interesting and instructive paper on the question of the physique of girls in elementary schools has been contributed by Mrs. Foard, L.E.C., to the *Southport Guardian*. The writer draws attention to the remarks of Dr. Dickeson Berry, the medical examiner of the Technical Education Board of the London County Council, who, as the result of an examination of 1,580 girls from elementary schools in London, found that spinal curvature was present in about twelve per cent., and in some instances as much as 22 per cent. There was a great tendency to anæmia, and many were below the average weight, which he considers calls very strongly for more attention to physical education than is found at present in elementary schools for girls.

Mrs. Foard is of opinion that gymnasiums attached to schools, to be used by the girls as well as the boys, would be the means of developing a better carriage, and less anæmia in the female portion. A sign of the great ignorance of the laws of health, which is unfortunately too prevalent, is that although girls of all classes are very much concerned as to the number of inches into which they can compress their waist, the chest measurements and development of breathing capacity, which are the foundation of physical and mental power are ignored.

She recommends also that lectures by medical officers of health on such subjects, illustrated with good diagrams and delivered in simple language, would be invaluable not only to the children, but to their parents, and expresses the hope that with the steady advance of public opinion in these matters, both education committees and county councils may see the necessity of such lectures. The children should be taught that the cultivation of a sound physique is greatly to be desired as an invaluable asset to their success in life.

* * *

Northwich to the Fore.

The scheme for the physical training of school children adopted by the Northwich Urban Council Cheshire, is now in full swing at the Verdin Technical School and Gymnasium. The children are already making rapid progress towards physical proficiency in the following subjects:—Swedish drill, dumb-bell drill, and bar-bell drill, under the direction of Mr. Percy Cullen.

* * *

A torpid liver is valuable, if it happens to be the liver of a whale. From this organ comes ambergris, and it is estimated that the ambergris from a single whale is worth 50,000 dollars.

Children and Nervousness.

Dr. Clouston, president of the Edinburgh Royal College of Physicians, read a paper on "Nervous Diseases and Symptoms of the School Age." After referring to various nervous diseases of children, he said that the actual mental disease of after life had often preludes and foreshadowings in the shape of certain mental symptoms during school life. Such symptoms might, however, exist, and in much intensity, without having much relationship to the fully developed mental diseases of adult life. There were many popular misconceptions about mental symptoms and moral defects which sensible parents and teachers should particularly avoid. They were apt to be thought too much or too little of. They should really be looked at in a sensible physiological way as equivalents and analogues to headaches and other such disturbances. Irritableness was very often part of a nervous disturbance, and impulsiveness a deficiency in the quality of mental inhibition or control. Stupidity and laziness were both in many cases mere nervous and not moral defects. Every perversity of moral sense and moral action, such as the showing of active and causeless dislikes to parents, friends, and teachers, bad temper, disobedience, even stealing and not telling the truth, as well as lack of conscientiousness in work generally—might all these not be mere symptoms of nervous derangement? There was a series of lesser mental and moral changes and perversions liable to occur in school children of both sexes with nervous, hereditary weakness that were always distressing and very often much misunderstood. They consisted in some cases of stupidity or lethargy or changes in the social instincts at the most social of all ages. The scholar ceased to mix with his friends, to play games, or to find pleasure in meeting his fellows, or were shown by intolerance of control by parent or teacher, and entire disregard of their feelings. Or there was a general cantankerousness and suspicion or entire want of common sense, even a frothy kind of religious feeling with no moral accompaniments, all being merely symptoms of and disturbances without being technically mental disease. They indicated undoubted wrong of the mind machinery in the brain. It was in the highest degree important that their true nature should be recognised, and that they should be judiciously treated on physiological and medical lines, rather than by merely pedagogic and disciplinary methods.

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To Post-Card Collectors.

Those of our readers who are fortunate enough to enjoy a holiday in this exceptionable summer can show their appreciation to those who are less fortunate, by sending them a photo or view of the resort where they may be staying, and for choice those that are produced by Messrs. Raphael Tuck & Son, for their last parcel to hand shows that each succeeding effort of theirs is a greater success than the last. No

matter what your particular taste may be in the best of artistic post-cards, you will always find that Messrs. Tuck have thought of your wants. It is also gratifying to learn that whilst others are discussing the merits and demerits of Free and Fair Trade, Messrs. Tuck are competing with success against all comers. This we may hope will continue, especially with the advent to man's estate of the son of Mr. Adolph Tuck, the Managing Director, which event was suitably commemorated.

The following series our readers will appreciate: "The Norfolk Broads," "Quaint Corners," "Marine Studies," "Military in London," "Cricket Illustrated," "By the Summer Sea," "Toilers of the Deep," "Flashing Motorists," "Golf," "Up the River," and "The Isle of Man."

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Proposed National League for Physical Education and Improvement.

We have received permission to publish the following particulars of the proposed League:—

CAUSES OF DEFICIENT PHYSIQUE.

The physical health of the people is a matter of public interest. It is also one of great public responsibility. It is not needful to enter upon the question whether the whole race is degenerating, but it is evident enough to every one who reflects upon the conditions of modern life, that it is possible to better those conditions, and thus to promote the improvement of the health and physical powers of the people, and indirectly their mental vigour and industrial efficiency. It is of especial importance to determine whether the conditions of town life necessarily tend to produce physical unfitness. In the light of the startling growth of town population, this is a subject of high national importance. The questions then which we have to face are:—

(1) Is the physique of the nation in all its classes quite satisfactory?

(2) If it is not, to what is the deficiency due?

(3) What means can be taken to remedy the deficiency?

To deal with one section of the community alone, it is alleged that three out of every five of those who offer themselves for enlistment prove to be unfit for military service. The majority of these may, as has been said, come from a low stratum in society, but this stratum, numerically, is very large,

and the numbers of the unfit may possibly be increasing.

Causes are at work which can hardly fail to act injuriously upon a large section of the population. Amongst the first may be placed the gradual withdrawal of the peasantry from the country and their aggregation in towns. Of the increase of three and a half millions of the population which took place between the census of 1891 and 1901, only a quarter of a million belonged to the rural population. Even amongst those who live in the country it is possible that ill-effects may have followed the lessening of the natural food supplies by the large demand for milk and country produce which is made by the enormous increase in the town population. In towns the keen struggle to make a livelihood, the difficulty of obtaining proper accommodation, the want of good air and playgrounds, improper and unwholesome feeding and overcrowding, late hours, premature smoking and drinking, and the strain on the nervous system due to town life, are likely to render the children of those who have immigrated from the country more weakly than their parents. These children marry, often at too early an age, without being able to make proper provision either for the housing or feeding of their progeny, and these are apt to fall a stage lower still. Moreover, the difficulty of earning a sufficiency will often tempt or compel the mothers to supplement their husbands' scanty earnings by working themselves even during pregnancy or too soon after confinement. When the baby comes they are too weak, too selfish, or too much occupied with work to suckle it. They are too ignorant to know how to feed the child artificially, and perhaps too much engaged with the daily work outside to give to it the time and attention it needs. The consequent mortality of children under one year is appalling and under five is excessive; of those who survive many grow up weakly with constitutions permanently damaged. The causes of this great infantile mortality indicate only too plainly the conditions under which the survivors grow up. Children a little older are obliged to attend school, in many cases whilst insufficiently fed, the hours of attendance are too long, and the opportunities for play and physical development much too few. Whilst still attending school they may be engaged in some sort of work during the day or evenings, often till quite late, and the temptation to those who are not so occupied is to congregate in the streets, or perhaps to go to public houses. Such conditions

obviously do not tend to the healthy development of the people.

Objects of the League.

It is obvious that as the causes of physical imperfection are so numerous and act upon such numbers of people and over such a wide area, the means to combat these causes must also be various in kind and must act over the whole length and breadth of the country.

A great number of agencies are already at

work giving instruction in the rules of health, in housekeeping, in cooking, and in the feeding of children. Others are trying to lessen the consumption of alcohol by supplying nutritious food in its place. Others again are trying to improve the physique of the rising generation by supplying gymnasia in town or country; by organising associations for physical exercise, such as cricket, football. drill associations, cadet corps, boys' brigades, rifle clubs, volunteer corps, and girls' clubs.

In the social class immediately above the lowest class of the population there are boys and girls whose occupations are sedentary and their wages small. They cannot afford to join tennis, cricket, football, and similar clubs. For these young and growing persons gymnasia and swimming baths should be available at a nominal cost. Already many municipalities are converting the swimming baths used only in the summer months into gymnasia for the winter months.

The numerous associations which are all working for the common object of increasing the physical development and well-being of our population are at present under the disadvantage of not knowing what the others are doing, and of being even unaware of their very existence.

Draft Scheme of the Proposed League.

The object of the proposed Physical Education and Improvement League is not to displace any of the agencies at present at work. but to make them known to one another, to ascertain how their work can best be supplemented where it is deficient, and to extend the benefits of physical training throughout the whole country. The league would thus be subdivided in a two-fold manner, territorially and functionally.

Territorially it would be divided into local branches. In each parish and in each small town there ought to be a branch, and in larger towns several branches, according to the population.

Several branches should become associated into a district, and several districts into a

THE LONG DISTANCE SWIMMING CHAMPIONSHIP.

KEW TO PUTNEY BRIDGE.

THE START.

county or borough branch. These might not only co-operate with one another, but also by a healthy rivalry might stimulate one another to active efforts.

Functional division is necessary, because the objects requiring attention are so numerous.

Each branch should furnish instruction to the people on the laws of health generally, to mothers on the care of children, to girls on the methods of cooking and housekeeping. Physical exercises and opportunity for open-air games should be given to both boys and girls; while the natural desire of boys to become volunteers should be encouraged, and drill, rifle, and shooting practice and all sports fostered. In every parish the squire, the parson, the doctor, and the schoolmaster, and in towns the mayors and corporations, should be induced, if possible, to take part in their organisation, whilst there should also be a committee of ladies to supervise the instruction of mothers and the care of children. The work to be done in each district would be subdivided, the ladies would undertake the teaching of mothers and the inspection of houses and children, the schoolmaster and mistress would supervise the physical exercises and games of the children, the squire or mayor, or others interested in the subject, would look after the provision for playgrounds, rifle ranges, club rooms and drill halls, and we feel sure that the doctor would give general advice and assistance wherever he could.

A great deal of work would be done locally by the branches, but it would be necessary to have a central bureau to which any branch might apply for any information or help which it required. It would also be part of the work of the League to initiate changes in, or additions to, existing laws, when such changes or additions seemed necessary, and the immense amount of information which would then be at the disposal of the League would render its advice invaluable. Amongst other

THE LONG DISTANCE SWIMMING CHAMPIONSHIP.

KEW TO PUTNEY BRIDGE.

THE FINISH.

The winner (Jarvis) getting into his boat.

objects to be aimed at would be the medical inspection of school children.

Constitution of the League.

The scheme proposed for the National League for Physical Education and Improvement is that it should consist of President,

MR. C. T. CARTER.

Vice-Presidents, Council, Fellows, Members, and Associates.

The President should be someone of exalted station whose name would stamp the League as being really national.

The Vice-Presidents would consist of Members of both Houses of Parliament, and of eminent representatives of the clergy, law, medicine, education, commerce, manufactures, the Press, and others.

Council.—This must necessarily be very large, and should consist of both men and women. It should include clergymen of all denominations, doctors, heads of schools of all sorts. Mayors of towns, chairmen of county councils, presidents or secretaries of town or county gymnasia, cricket clubs, football clubs, cadet corps, boys' brigades, church brigade, lads' drill associations, rifle club, girls' clubs, lecture associations, temperance associations, professional teachers—male and female—representing the various systems, and last, but not least, all editors of journals of every shade of political opinion, religious papers, papers for children, for boys and for girls, and writers of books for children and youth.

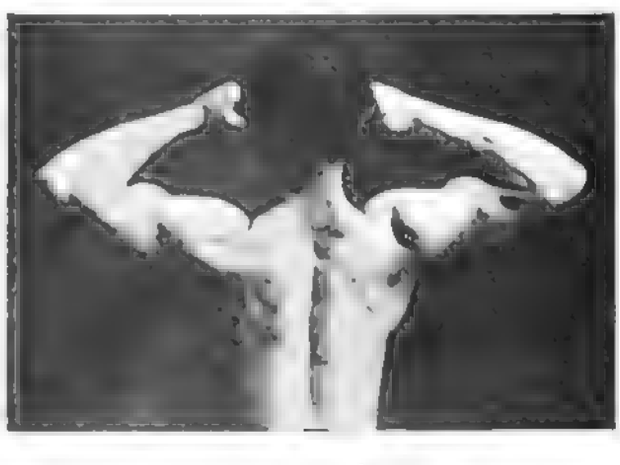
There should be a Council, with local president and vice-presidents, for each branch, however small. From this Council one or more delegates might be sent to a District Council, and others from the District Councils to County Councils. From these District Councils representatives might be chosen to form a General Council, and from this an Executive Committee and Officers may be selected.

Fellows are those who are interested in the subject, and pay a yearly subscription of (?) *a guinea*, or a life subscription of (?) *ten* [*or five*] *guineas*.

This subscription would entitle the Fellows to receive gratis any periodicals published by the League, and any larger works at a reduced price.

Members.—For these the yearly subscription would be (?) *five shillings* [*or half-a-crown*]. This would entitle them to receive gratis the "Physical Education News."

Associates.—These would subscribe (?) *one shilling* yearly. They would not be entitled



MR. C. T. CARTER.

to receive any of the publications of the League gratis, but might obtain such as they desired to have at a reduced price.

Fellows, members, and associates would all have the privilege of attending meetings

and taking part in any of the work or games connected with the League either gratis or at a reduced fee, as determined by the local branch to which they belonged.

Fellows or members, but not associates, would have a vote in the election of the local Council.

* * * *

Messrs. Holden Brothers, the makers of the "Natureform" boots, etc., have sent us a pair of their indiarubber-soled shoes for use during exercise. The feature of these shoes is that the inner sole line is perfectly straight, thereby avoiding that compression which arises in the ordinary gymnastic shoe, and which is so undesirable. The shoes appear to have all the advantages claimed for them.

* * *

Great Yarmouth Leads.

It is pleasing to note that the authorities of the borough of Great Yarmouth have decided to take the necessary steps for procuring a complete physical record of the children in the fourth and fifth standards of the elementary schools of the borough. This has just been completed, the particulars taken being age, weight, chest measurement, any defect of eye, ear, and limb. Each school is to preserve its own record, from which the Clerk is to tabulate the results of all and supply copies to the members of the Educational Committee. We heartily commend the example set by Great Yarmouth to other educational authorities throughout the kingdom.

* * *

Mr. Cecil Thomas Carter, of Nunhead, whose photos appear on these pages has been a pupil at Sandow's City School for ten months. He practised about three months before joining, but not in the proper manner. He had always been a very sickly lad and extremely weak, until he joined the school, and can now work at Sandow's Exercises for over an hour without being fatigued in the least. The following are his measurements:—Age, 20 years; neck, 16½ ins.; chest, contracted, 33 ins.; chest, expanded, 41 ins.; arms, 13 ins.; forearm, 11½ ins.; waist, 28¾ ins.; thighs, 21 ins.; calf, 13 ins.; height, 5 ft. 7½ ins.; weight, 10 st. 3½ lbs.; chest expansion, 7 ins. Lung capacity 310, which is the record for the school.

* * *

*** The competition for Schools which appeared in the Supplement last month is in no way connected with SANDOW'S MAGAZINE or Mr. Sandow, the Proprietor of *National Physical Education* being entirely responsible for the carrying out of the same.

"SONNING LOCK."

(*Raphael Tuck & Son's Ltd., Aquarette Postcard. Series* 6422.)

Our Muscular System.

WE are indebted to that excellent publication *Health* for the following lucid description of the muscular system of the body, which to those teachers who contemplate taking up the physical education of their charges should provide most valuable and interesting reading.

Every movement of the body is due to the action of the muscles, which, along with the bones, make up the mass of our limbs. Muscle and flesh are one and the same thing. Flesh is simply muscle with fat incorporated in its tissue. The great and characteristic property of muscular tissue is that of shortening itself in a particular direction when stimulated. This property is called contractility, and when the muscle acts it is said to contract. Everyone is familiar with muscular contraction. To illustrate it, let the reader place the right hand over the front of the left arm midway between the elbow and the shoulder; now bend the elbow, i.e., bring the forearm up to the arm. Whilst this is taking place, a hard swelling is felt to rise up beneath the right hand, which most people know to be a muscle called the biceps. The cause of its swelling up is that the muscular elements have re-arranged themselves so that the muscle becomes a hard ball, and the effect produced by its swelling up is the motion of the forearm.

The stimulus to the muscle causing contraction may be direct irritation by mechanical means, or by galvanism, or by some chemical substance, but in the living body the muscles are generally made to contract by the influence of the nerves distributed to them, which are in consequence called motor nerves, and are under the influence of the will. By the exercise of the will we can cause contraction of one or more muscles, and to any extent within certain limits.

As a matter of fact, there is hardly any movement of the body in which several different muscles are not brought simultaneously into play. But every voluntary muscle is also subject to other influences more powerful than those of the will. The movements of the features under the influence of the passions are more or less independent of the will, which has little power to restrain them. Many muscular acts are induced by impressions from without, and are said to be reflex.

Muscles vary much in their form. In the limbs they are generally long, surrounding the bones, and acting as a protection of considerable importance to the joints. In the trunk they are, as a rule, broad and flat, and aid essentially in forming the walls of the cavities which they enclose.

The skeleton, which may be regarded as the locomotive framework, is composed, as it were, of a series of levers, of which the fulcrum is, in the majority of cases, in a joint—that is, at one extremity of a bone—the weight, or resistance, at the further end, and the force (or muscle) midway between the two.

When examined under a high magnifying power, the fibres of which muscles are composed are found to occur in two forms, distinguished from each other by the presence, or absence, of minute transverse bars, or stripes.

The fibres which compose the voluntary muscles—those which are thrown into action by nerve-fibres under the control of the will—as well as the muscular tissues of the heart, are striped; the involuntary muscles, such as

those which act on the intestinal canal and the blood-vessels independently of the will, are unstriped.

On looking at a voluntary muscle with the naked eye it is seen to be made up of fibres, which run in the direction in which the muscle is to contract. These fibres are arranged in bundles of various sizes, enveloped in sheaths of areolar tissue, which serve at the same time to connect them with, and isolate them from, those adjoining. On examining the smallest bundle, or fasciculus, visible to the naked eye, it is seen to be composed of numerous cylindrical fibres closely bound together, and all lying in a parallel direction. Each fibre consists of an elastic sheath, termed the sarcolemma, which contains a semi-fluid, contractile substance, showing transverse stripes at regular intervals, and longitudinal stripes as well.

The sarcolemma is pierced by nerve-fibres which end in the contractile substance. The blood-vessels supplying the muscles simply lie in the intervals between the fibres; they do not pierce the sarcolemma. The muscles are attached to the parts which they are designed to move by means of tendons, or "leaders," as they are popularly called. The voluntary muscles are red, although pale fibres may be scattered through many of them. Each muscle consists of a middle portion or belly, and two thinner extremities which are attached. When the belly contracts, it acts in a straight line, and drags equally on both extremities: one of these is, however, more fixed than the other, so that the latter is brought nearer to the former, and so the fixed end is termed the origin, and the movable end the insertion of the muscle. As a rule, muscles are attached to bone, and grouped in the neighbourhood of joints.

Involuntary, or unstriped, muscle consists for the most part of flattened bands of considerable length, but of extreme narrowness. Their substance is finely marked in a longitudinal direction, and each cell contains an elongated nucleus. Every one of these bands is either a single cell or a collection of cells. The involuntary muscular fibres have, as a rule, no fixed attachment, but form complete envelopes for cavities within the body, such as the blood-vessels and intestines. They are also found in the skin and other tissues.

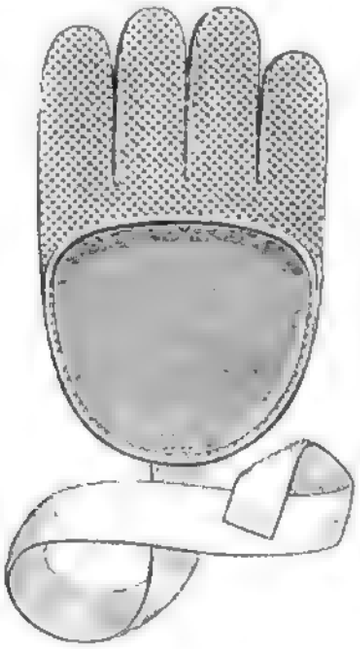
The heart muscle, though not under the control of the will, differs noticeably from the muscular tissues described above. It consists of more or less square cells, branched at their ends. Near the centre of each cell there is a clear nucleus of an oval shape, and the cells are striped, but not so distinctly as those of a voluntary muscle. They do not, however, possess a sarcolemma.

The substance of which the muscular elements are composed is termed syntonin, which closely resembles the coagulating constituent of the blood, existing in the living tissue in a fluid form, and solidifying only after death.

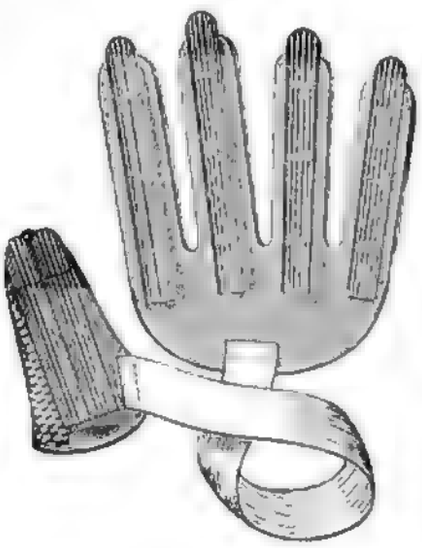
SPORTING SPECIALITIES.

In these columns we propose introducing to our readers the latest developments and innovations in the way of sporting implements, etc., particulars of which we shall always be pleased to receive.

At this period of the year the national pastime, of course, claims most attention, and therefore anything connected with



cricket is likely to prove interesting. Wonderful strides have been made of late years in the manufacture of the various implements of the game, until one almost wonders when perfection will be reached. One firm, in particular, is making a big effort to reach the pinnacle first, and the goods turned out by them certainly merit the patronage they are receiving. Messrs. A. G. Spalding and Bros. are rapidly taking a foremost place in the manufacture of all kinds of sporting implements. First-class workmanship is the hall mark of everything turned out by them, and they are continually introducing improvements. Their latest pattern of batting glove —illustrations of which will be found on this page—should have a big demand. It is known as the Rubber Faced Grip Glove, and is very comfortable, being cool and flexible. The face is so made as to make the rubber sheath so often used on bat handles unnecessary. For the manufacture of their "Grand Prix" bats, Messrs. Spalding have recently bought up all the available stocks of



first class willow; and according to the opinion of many leading cricketers, there is no better ball than the "Grand Prix" match ball.

ALTHOUGH I have opened these pages for the purpose of coming into closer touch with my friends and readers, you must remember that space is limited, and I *cannot* prescribe courses here.

The attention of my readers is called to an announcement on page vii of advertisements.

All communications relating to Instruction by post should be addressed to me at Basing House, Basinghall Street, E.C., and these will receive prompt attention.

Ordinary replies cannot be answered by post.

H. Turner, Ontario.—The number of times should be doubled for counts. For instance, 20 times = 40 counts.

Emerald Isle and T. Turnbull, Newcastle.—Your questions are receiving due attention.

Want-to-Know.—Upper arms and chest particularly, and then the thighs and weight should receive attention. Otherwise they are the average for a boy of your age. Under no circumstances trouble about how much you can lift with one hand. It conveys nothing to the expert.

Blackheath.—You fail to mention the most important item—your age. On that a great deal depends. Your chest and arms sadly need attention. Procure a pair of dumb-bells as well as the developer you have and start in earnest. The amount of work you can do can best be determined by actual experience.

A. P. Dale, Beith.—Thanks for your letter, which is most interesting. Also for your photo, which I will endeavour to reproduce. As far as it shows, your development is fair.

Demarius, Clapham Common.—My height is 5 ft. 9 ins., and therefore slightly above the average. I am glad to see you are so interested in National Physical Education. There is a great deal to be done in this direction, and I intend using all my powers to further this great object.

A. W. F. Morrison, Invercargill.—Your interesting letter to hand. The point raised is receiving my attention, but, at present, cannot say whether I shall be able to let your hopes become realised. Glad to know you are improving in physique.

R. C. Thomas, Newport.—Regret I cannot reproduce photo as requested, but will do so at the earliest opportunity, for you show good development, particularly of abdominals. You set a fine example to other boys.

A. E. V. Aldous, Bareilly, India.—Judging from photo and particulars I must compliment you on your measurements. Will try and find room in Magazine for photo at a future date.

M. Jacobson, N.E.—The course you are adopting is an excellent one. See answer to *Aldous re* photo.

Daniel Smith, Junr., Dunbar.—Thanks for photo. The increase in measurements shows your earnestness. Continue with dumb-bells and developer steadily.

L. B. Thompson, Bendigo.—Should like to reproduce photos, as they show excellent results of following my system, but the prints are not strong enough.

Fionn, S.E.—1. I certainly mean the combined weight, *i.e.*, 3 lbs. each, and even this is ample. 2. Not at all. It is purely a matter of choice. Of course, seeing the muscles at work is an advantage.

Marion E. Render, Underley.—Thanks for good wishes.

Serratus, Wellington, N.Z.—The New Zealand A.A.A. are quite within their rights, and, moreover, in perfect unison with the A.A.A. and also the Amateur Rowing Association here. There can be no doubt as to your lack of status. The exercises are essentially athletic.

Danie.—Thirty minutes exercise per day is ample for anyone. It is far better to make a judicious selection from the various exercises than to attempt to do all of them. That only tends to make one become slack in his work. You would find a combination of dumb-bells and developer with expander on alternate days produce most satisfactory results.

S. N. Tirumalachari, Madras.—Very many thanks for your long and interesting letter, and the suggestions contained therein, and I will bear them in mind. I think you will notice a move in the direction you mention in the present volume. The special chart for chest development contains most of the breathing exercises. Take no notice of the absurd suggestion that proper breathing will depreciate the development of the body. Quite the reverse; it will improve it. The cost of the chart you mention is *1s. 6d.*

Sandringham, Glasgow.—(A) Excessive leg exercise or standing. A tight garter or a compression on any part of a large vein or artery will cause it. They are no indication of a weak heart. (B) The only complete and safe cure is a slight operation. (C) Yes. For the time being discontinue leg exercises and avoid standing too long. See your doctor and get his opinion as to an operation. The time you devote to exercise is not any too much, but just sufficient to keep you fit. I advise you to use the developer as well as dumb-bells, and to take Plasmon in powder form with your food. The Plasmon cocoa for breakfast you will also find an excellent preparation.

Wm. S. Hughes, Stanningley.—I do not give the certificate you mention. Shall be glad to receive photo.

Castlethorpe.—You have two choices. 1. Attend one of my schools. 2. Take a course of instruction by Post. 3. You might derive some benefit by repeating that course, adding an extra spring.

Excelsior, Arbroath.—You are doing all that is required in the way of exercise, etc., but you need to build up the body. This is a very great point seeing that so much waste is taking place. You cannot do better than take Plasmon in every form possible, and have at least three good square meals per day. Report progress in a month from now.

Beller, Derby.—The bells are not too heavy, but are of ample weight. The chances are that you are not doing the exercises correctly. You must study the theory as well as the practice of Physical Culture. You need also to put on weight. Am glad to know the Magazine is in such great demand in your district.

Wednesbury.—It sounds as if you had strained something more than a superficial muscle. Drop gymnastics altogether for the time being at least. Take some very light free movements for two or three weeks, then commence with dumb-bell and developer (also light work), taking half the usual strain for each. Combine with the whole of this treatment local massage night and morning with my Embrocation. Report progress in a month from now.

Hatlam, Canada,—1. Yes, they can become as strong, but not so big. It is not necessary to be big to be strong, particularly in the bones. 2. It is possible up to the age of 25 or 26, but not after. The muscles, however, will go on increasing until past middle age. 3. I am glad to hear you have followed my exercises, but advise you to try a combination of the whole, viz., dumb-bells, developer, as well as expander. Certainly, do not despair. You are yet young. 4. Yes. Massage is of great assistance in this instance, but exercise itself will do as much, if not more. 5. This only bears out my reply to your first question, but in any case it is only a test of local and not general strength. I am glad to hear you are so interested in my system and are encouraging others. Shall be pleased to hear from you again.

*** Correspondents are requested to keep a copy of their questions to avoid having to make a second enquiry on the same subject.

Sandow's Sports Bureau.

With a view to providing a medium whereby readers of his Magazine may obtain the best advice in the selection of various sporting implements, Mr. Sandow has secured the co-operation of experts in various branches of sport, whose opinions will be given free of all cost.

The benefits accruing therefrom to the purchaser are incalculable, for without any charge whatever, he will secure the assistance of one of the best men in every branch of athletics, in the selection of the articles desired.

Be it a bat, football, racquet, cycle, rifle, or anything else that may be required, all that the reader has to do is to write to the

Expert Department,
Sandow's Magazine,
131, Temple Chambers,
E.C.,

stating the nature of the goods wanted. The Expert will at once (by return post if possible), forward a quotation for the best article of its kind. On return of the quotation slip with the amount stated, the goods will be specially selected by the Expert, and forwarded. It will be definitely stated on the quotation sheet whether the price includes carriage or not.

This is not an offer to the general public, but only to readers of SANDOW'S MAGAZINE.

Sandow's Sports Bureau Coupon.

To the Expert Department, Sandow's Magazine,
131, Temple Chambers, E.C.

Please give your advice and particulars as to price, etc., of articles mentioned below.

Name.....

Address.....

.....

Requirements :—

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CHIEF SPORTING FIXTURES
FOR AUGUST.

TURF.

**** *The figures in parentheses in this Index denote the number of days' racing at each Meeting.*

1—Newton Abbot (2).
1—Metropolitan (Baldoyle) (1).
1—Hurst Park (1).
1—Birmingham (2).
1—Ripon (2).
2—Brighton (3).
3—Eglinton (2).
3—Galway (2).
5—Haydock Park (2).
5—Lewes (2).
8—Youghal (1).
8—Nottingham (2).
9—Milltown Malbay (1).
10—Carrickmacross (1).
10—Layton (1).
10—Kempton Park Second Summer (2).
11—Laytown (1).
11—Paisley (2).
12—Redcar Second Summer (2).
12—Windsor (2).
15—Wolverhampton (2).
15—Tramore (3).
16—Stockton (3).
17—Folkestone (2)
19—Hurst Park (2).
20—Leopardstown (2).
21—Baden-Baden (1).
23—Baden-Baden (1).
23—York (3).
24—Devon and Exeter (2).
25—Baden-Baden (1).
26—Phœnix Park (2).
26—Gatwick (2).
26—Hamilton Park (2).
27—Baden-Baden (1).
28—Baden-Baden (1).
30—Derby Summer (2).
31—Plymouth, Devonport, and Stonehouse (2).
31—Cork (2).

CRICKET.

1—(Bank Holiday)—Canterbury, Kent *v.* Essex (Canterbury week).
1—Oval, Surrey *v.* Notts.
1—Leeds, Yorkshire *v.* Lancashire (Hirst's Benefit).
1—Worcester, Worcestershire *v.* Warwickshire.
1—Derby, Derbyshire *v.* Hampshire.
1—Taunton, Somerset *v.* Middlesex.
1—Bristol, Gloucestershire *v.* Sussex.
1—Leicester, Leicestershire *v.* South Africans.
1—Manchester, Lancashire (2nd XI.) *v.* Yorkshire (2nd XI.).
4—Canterbury, Kent *v.* Surrey (Canterbury week).
4—Brighton, Sussex *v.* Hampshire
4—Birmingham, Warwickshire *v.* Derbyshire.
4—Leicester, Leicestershire *v.* Yorkshire.
4—Leyton, Essex *v.* Notts.
4—Bristol, Gloucestershire *v.* Middlesex.
4—Manchester, Lancashire *v.* South Africans.
8—Sheffield, Yorkshire *v.* Middlesex.
8—Taunton, Somerset *v.* Worcestershire.
8—Oval, Surrey *v.* Warwickshire.
8—Bristol, Gloucestershire *v.* Kent.
8—Brighton, Sussex *v.* Lancashire.
8—Nottingham, Notts *v.* South Africans.
8—Chesterfield, Derbyshire *v.* London County.
11—Lord's, M.C.C. and Ground *v.* South Africans.
11—Nottingham, Notts. *v.* Middlesex.
11—Bristol, Gloucestershire *v.* Worcestershire.
11—Huddersfield, Yorkshire *v.* Warwickshire.
11—Southampton, Hampshire *v.* Leicestershire.
11—Oval, Surrey *v.* Sussex.
11—Leyton, Essex *v.* Lancashire.
11—Taunton, Somerset *v.* Kent.
15—Lord's, Middlesex *v.* Lancashire.
15—Leeds, Yorkshire *v.* Essex
15—Worcester, Worcestershire *v.* Kent.
15—Portsmouth, Hampshire *v.* Sussex.
15—Derby, Derbyshire *v.* South Africans.
18—Lord's, Middlesex *v.* Surrey.
18—Brighton, Sussex *v.* Yorkshire.
18—Manchester, Lancashire *v.* Notts.
18—Worcester, Worcestershire *v.* Gloucestershire.
18—Tonbridge, Kent *v.* Hampshire.
18—Leicester, Leicestershire *v.* Essex.
22—Lord's, Middlesex *v.* Kent.
22—Taunton, Somerset *v.* Surrey.
22—Liverpool, Lancashire *v.* Leicestershire.
22—Cheltenham, Gloucestershire. *v.* Yorkshire (Cheltenham week).
22—Crystal Palace, London County *v.* Warwickshire.
23—Brighton, Sussex *v.* South Africans.
25—Manchester, Lancashire *v.* Derbyshire.
25—In Sussex, Sussex *v.* Middlesex.
25—Taunton, Somerset *v.* Yorkshire.
25—Cheltenham, Gloucestershire *v.* Surrey (Cheltenham week).
25—Worcester, Worcestershire *v.* Leicestershire.
25—Bournemouth, Hampshire *v.* Warwickshire (Bournemouth Festival)
25—Canterbury—Kent *v.* South Africans.

ROWING.

1—(Bank Holiday)—Reading Regatta.
1—Newhaven Regatta.
1—Tewkesbury Regatta.
6—Marlow Regatta.
6-13—Reading Working Men's Regatta.
10-11—Staines and Egham Watermen's Regatta.
13—Brighton Regatta.
13—Anglian B.C. Regatta.
15—Hastings Regatta.
16—Eastbourne Regatta.
17—Shoreham Regatta.
18—Worthing Regatta.
19—Hove Regatta.
27—Iris R.C. Regatta and Inter-Club Race *v.* Anglian B.C.
29—Herne Bay Regatta.
30—Folkestone Regatta.
31—Dover Regatta.

YACHTING.

1—Royal London Y.C.
1—Gravesend S.C.: Open Cup Race from Port Victoria—final.
2—Royal Yacht Squadron: King's Cup.
3-4-5—Royal Yacht Squadron.
6—Royal Portsmouth Corinthian Yacht Club.
6—Royal Western Yacht Club of Scotland: Regatta.
9-10-11-12—Royal Victoria Yacht Club, Ryde.
13—Royal Southern Yacht Club, Calshot.
13—Royal Largs Yacht Club: Town Regatta.
15-16—Royal Albert Yacht Club, Southsea.
18—Channel Matches: Cowes to Weymouth.
19—Gourock Yacht Club: Closing Matches.
20—Southend-on-Sea Regatta.
20—Clyde Corinthian Yacht Club: Closing Matches.
20—Gravesend Sailing Club: Club Race to Erith.
20—Royal Dorset Yacht Club, Weymouth.
22—Torbay Royal Regatta.
23—Royal Torbay Yacht Club.
26—Royal Dart Yacht Club, Dartmouth.
26 and 27—Royal Clyde Yacht Club: Closing Matches.
29—Channel Matches: Dartmouth to Plymouth.
30—Royal Western Yacht Club.
31—Port of Plymouth Regatta.

ATHLETICS AND CYCLING.

(For Bank Holiday Sports, see Sporting Papers.)
6—City of London Police Sports, at the Crystal Palace.
20—Southend: Sports.

SWIMMING.

1-2—Yorkshire County 440 Yards Championship, at Leeds.
2—Midland Counties Team Swimming Championship at Leicester.
6—English Half-mile Championship, at Swindon.
13—English 200 Yards Breast Swimming Championship, at Reading.
20—International Match: Ireland *v.* England (Water Polo), at Portrush.
20—Northern Counties 1,000 Yards Championship, at Blackpool.
20—Otter S.C. River Race, at Shiplake.
20—Half-mile Championship of the Trent.
22—Western Counties 100 Yards Championship, at Weston-super-Mare.
25—Penzance Annual Matches.
29—English Ladies' 100 Yards Championship, at Leeds.
30—Northern Counties Squadron Championship Semi-final, at Hyde.
31—Northumberland and Durham 440 Yards Salt Water Championship, at South Shields.

GOLF.

1—Bushey Hall: Open Bank Holiday Competition.
1—Seacroft (Skegness): August Meeting.
1—Buxton and High Peak: August Meeting.
1—Royal Liverpool: Summer Meeting.
2—Enfield: Ladies' Summer Meeting.
2, &c.—Royal and Ancient: Calcutta Cup (handicap).
3—Dieppe: Bogey Sweepstakes.
5—Edinburgh Hibernian: Summer Outing at Gorebridge.
6—East Lothian: The "Hope" Gold Medal and Gold Pendant.
8-9—Dieppe: Prix de Dieppe (36 holes stroke competition).
11—Ramsey, Isle of Man: Tournament.
11-12—Dieppe: Ladies' 18 holes Stroke Competition.
15—Dieppe: Mixed Fours.
15—Chislehurst: Ladies' Open Meeting.
18—Chislehurst: Ladies' Rodwell Challenge Bowl.
22-25—Southwold: Summer Meeting.
24-25—Dieppe: Prix du Casino (36 holes stroke competition).
24-25—Northern Counties Cup, at Balgownie, Aberdeen.
26-27—Minchinhampton: Summer Meeting.
27—Dieppe: Prix de l'Hotel Royal (men's fours).
31—Golfing Cricketers *v.* Cricket Golfers, at Lord's.
31—Australian Championship, at Sydney.

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